BULLETIN OF THE
SCHOOL OF EDUCATION
INDIANA UNIVERSITY

Vol. XVI BLOOMINGTON, INDIANA No. 1

December, 1939

Entered as second-class mail matter September 30, 1924, at the postoffice at Bloomington, Indiana, under the Act of August 24, 1912. Published quarterly from the University Office, Bloomington, Indiana.

AN EXPERIMENTAL STUDY OF STANDARDS FOR THE SELECTION OF CANDIDATES FOR TEACHER-TRAINING INSTITUTIONS

by

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Price, 50 cents
For sale by the University Bookstore, Bloomington, Indiana

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Acknowledgment

THE investigation reported in this bulletin was made possible by a grant from the appropriation for research in the professional schools in Indiana University. The authors of the bulletin are under special obligation to William Frederick Affolder, who assisted in collecting and tabulating the data; to the faculty of the School of Education, who gave helpful advice and criticism; to the 47 sophomores and 13 seniors enrolled in Indiana University, who very generously contributed their time; and to Miss Kathleen Dugdale, who assisted in organizing and editing the manuscript.

H. L. S.
M. T. E.

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Introduction

In recent years teacher-training institutions have become conscious of the need for a shift of emphasis in education from that of merely imparting information to that of transmitting the cultural background of the race and preparing the individual for a vocation.[1] It seems that the basic assumption underlying the older conception of education is that people are going to face somewhat the same problems today and tomorrow that they faced yesterday. In other words, the individual is being prepared to play his role in a static society. This earlier philosophy of education still serves as the guiding principle in some school systems, although leaders in the field of education are beginning to realize that such an educational program does not adequately meet the needs of the present day. The rapid economic, political, and social changes of the modern era demand a new type of leadership—a type in which the methods are more or less experimental.

If education hopes to prepare the individual for the new social order, it must strive to develop a program that is not only more flexible but also more comprehensive, in order that the student's life may be enriched as well as his store of knowledge increased while he is in school.

The teacher-training institutions are faced with the problem of training teachers who can assume these new educational responsibilities. To do this, they must accept for training only those students who have the moral, social, and intellectual traits needed in order to become successful and desirable leaders. The teacher-training institutions should strive to develop the powers of these individuals to the utmost.

PROBLEMS OF THE STUDY

The present study was undertaken in an attempt to establish tentative standards for admission of candidates to teacher-training institutions so that educators may direct into the teaching field those students who possess the qualities essential to the teaching profession and discourage those whose success seems doubtful. In other words, the problem is that of educational guidance and selection.

In setting up the requirements for prospective teachers, the writers found that it was necessary to determine: first, what were the pertinent factors which make for teacher success; and, second, whether or not those qualities or traits could be scientifically measured.

From a survey of the studies made in predicting teaching success, it is evident that there is little general agreement among educators as to the pertinent factors which make for instructional efficiency. There are at least two reasons why it is difficult to determine these factors.[2] In the first place, there is the lack of agreement as to what constitutes success in the teaching field. Most educational writers maintain that

[1] Walke, N. S. *Traits Characteristic of Men Majoring in Physical Education at the Pennsylvania State College.* p. 1.

[2] Stuit, D. B., and Corey, S. M. "Subject Matter Preparation of Secondary School Teachers: Factors Contributing to Teaching Success." p. 491.

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pupil progress should be taken into consideration in formulating a criterion of teaching success; however, there is little, if any, consensus as to the interpretation of progress. Some think of it in terms of achievement, others in terms of growth in attitudes and ideals, and still others as the more general all-round development of the child. As yet practical school men and research workers in teacher personnel have been unable to set up a criterion of success which would include all these divergent points of view.

In recent years there has been considerable discussion as to the most effective means of measuring teaching success. There are those who maintain that the efficiency of a teacher can best be determined by means of achievement, personality, and attitude tests administered to the students. On the other hand, there are those who firmly believe that the rating scale is the best instrument for estimating teaching success. Stuit and Corey[3] pointed out that, while the first of these methods is more objective than the second, it is not as good because it assumes that success in teaching is made up of the total of these isolated areas of activity. As a result of their study, Stuit and Corey concluded that the composite judgment of a competent rater is probably the most valid and reliable measure of instructional efficiency which it is possible to obtain at the present time.

Tiegs,[4] in his study, concluded that the graphic rating technique has promise as a method for use in teacher selection. Leaders in the field place considerable emphasis upon the necessity of gathering all available data concerning an individual. These various types of data should be studied in relation to one another. It is true that single measures as derived from tests and rating scales may have value; however, the greatest contribution of a measure lies in the possibility of using it as a part of a unified picture of the individual. It is also necessary to consider the teacher in relation to his particular teaching situation, since research workers have unveiled the fact that a teacher who is a failure in one situation might easily be a success in another.

In selecting the qualities or traits to be used as a basis for this study, the writers were guided, first, by the agreement among educational leaders on certain traits which make for teaching success; second, by those qualities or traits which can be more or less objectively measured; and, third, by those qualities or traits which educators maintain are instrumental in bringing about the dismissal of teachers.

[3] *Ibid.*, p. 491.
[4] Tiegs, E. W. *An Evaluation of Some Techniques of Teacher Selection.* 1928.

Previous Investigations in the Field

ALTHOUGH a number of studies have been made to determine the factors necessary for teaching success, educators have not as yet agreed on these factors.

A survey of the literature indicates that studies have been made of a number of problems which are more or less closely related to the one chosen for the present study. Ullman[1] conducted a study in which he made extensive use of various social factors. He attempted to find the relationship between teacher ratings and such factors as general intelligence, academic achievement, socio-economic status, teaching knowledge, and supervised teaching. He found that success in supervised teaching was the best single predictive measure of teaching success.

Kriner's[2] study dealt with the relationship between actual teaching success and factors perceivable before the students entered teacher training. His study contrasted 130 of the best teachers with 130 of the poorest. These teachers were selected from 20 school systems in the state of Pennsylvania. Kriner concluded that teaching success depended upon many factors, the following being the most important: (1) health, (2) intelligence, (3) interest, and (4) qualities of leadership.

Odenweller[3] attempted to determine the degree to which effectiveness in teaching is predictable. He made an intensive study of 560 elementary school teachers in Cleveland, Ohio, and came to the conclusion that personality has a closer relationship to the quality of teaching than has any other trait.

Knight[4] conducted an investigation which dealt with: (1) methods of rating teaching, (2) determination of the significant factors in teaching ability, and (3) objective measurement of such factors. He concluded that the general factor of interest in one's work becomes dominant in determining one's success in teaching.

Somers[5] studied the records of 156 graduates of the State Normal School at Farmville, Virginia. The factors studied in relation to their correlations with teaching success were: age, mental test scores, personality ratings, etc. Somers was concerned with the proper selection of students for the normal school and with the reasons for their success. He concluded that a combination of tests, personality ratings, and school record should determine fitness for admission to the teacher-training institution.

For the year 1930-31, the State Teachers College[6] at Buffalo made a scientific study of its selective policy. The variables chosen for study that year were: (1) high school achievement, (2) personality, (3) reading ability, (4) general intelligence, and (5) Regents' averages.

After studying the literature in the field, the authors of the present study have agreed that the following factors should be considered in a

[1] Ullman, R. R. *The Prognostic Value of Certain Factors Related to Teaching Success.* 1931.
[2] Kriner, H. L. *Pre-Training Factors Predictive of Teacher Success.* 1931.
[3] Odenweller, A. L. *Predicting the Quality of Teaching.* 1936.
[4] Knight, F. B. *Qualities Related to Success in Teaching.* 1922.
[5] Somers, G. T. *Pedagogical Prognosis.* 1923.
[6] Hertzberg, O. E. "More Rigid Entrance Requirements for Teacher-Training Institutions." p. 703.

program of selective admission to teacher training: (1) health, (2) intelligence, (3) scholastic achievement, (4) personality, and (5) vocational interests.

HEALTH

Good health is a more necessary qualification for a teacher than for most workers, because the teacher comes in contact with many children during the course of the day, and therefore exposes many others to any contagious disease, such as colds, which may have been contracted. It seems, therefore, that the very nature of teaching, with its numerous social contacts, necessitates an optimum status of health on the part of the teacher.

Yet what steps have been taken to make certain that only those teachers who are physically fit are permitted to enter the teaching profession?

Approximately three fourths of the states require the applicant for a teacher's license to present a certificate of health signed by some reputable physician. However, a comparison of the medical ratings of the education, physical education, and general education groups seems to indicate that this requirement has done little, if anything, to improve the status of health in the teaching profession.[7] Walke reveals that the education group in his study not only rated lowest but also had more of its students in the D or lowest division on the health rating scale.[8]

An investigation carried on under the auspices of the United States Bureau of Education[9] brought to light some interesting facts in relation to health requirements of candidates for admission to teacher-training institutions. Of the 118 normal schools included in the study, 60 made no mention of health as a requirement for admission to teacher training, while 17 required certificates of health signed by family physicians. Sixteen schools maintained that health was a requirement; however, they had no checkup on the health of their students. Most of the other 25 institutions required that parents or high school principals send letters certifying to the health of the candidates. Only a very few of the normal schools included in the study gave medical examinations by certified physicians in the employ of the teacher-training institutions.

Research workers maintain that in many cases a teacher's status of health is far below the standard reasonably attainable by him. It may therefore be concluded that, while teachers recognize the desirability of good health, they do not always appreciate what really good health would mean to them professionally, economically, and personally.[10] A study recently completed by the National Education Association revealed that 15 to 20 per cent of the teachers in the United States lack the kind of vigorous health needed for regular and effective work in the classroom.[11]

[7] Terman, L. M. *The Teacher's Health.* p. 108.
[8] Walke, *op. cit.*, p. 34.
[9] Suhrie, A. L. "Problems in Teacher Training." p. 251.
[10] Wood, T. D. "Health, the Teacher's Pearl of Great Price." p. 635.
[11] *Ibid.*, p. 636.

Mental health and social poise are often seriously affected by ill health. In certain individuals, defective hearing or eyesight, diseased teeth or sinuses, or some other health disorder paves the way for nervous diseases, such as psychosis.[12]

From her study, Case[13] found that the ill health or social maladjustment of the teacher often results in biased viewpoints and unreasonable attitudes which leave an undesirable and lasting mark upon the minds and personalities of the pupils.

It is necessary that a teacher have the physical stamina and nervous balance to meet the problems of the adolescent without emotional conflict. Under the intelligent leadership of a guidance counselor, students who lack these qualities could be directed into a line of endeavor other than that of teaching. It is believed that the teacher-training institution could do much to improve the status of health in the field of teaching by requiring that certain health standards be met by its students.

INTELLIGENCE

The general factor of intelligence has always been known to be important in teaching success. Perhaps this fact will explain, to some extent at least, why intelligence has been the subject of so many investigations. At the present time, however, there is little general agreement among leaders in the field of education as to the real value of intelligence tests. A summary of 18 studies involving intelligence and student-teaching success reveals that the range in coefficients of correlation between these two variables is from a negative correlation to one of +.54, the median being +.23.[14] In no case is the relationship between intelligence and teaching success particularly marked. However, as Corey[15] has pointed out, the fact that high school teachers have graduated from college is evidence that they are a highly select group from the point of view of intelligence, and therefore any correlation involving the intelligence of student teachers would naturally be decreased.

The results of intelligence tests given in different institutions to students preparing to teach have in many cases shown these students to rank lower on the tests than do students in other departments of the institution. In the Pennsylvania study of the Carnegie Foundation, for example, which was a large-scale project affording comparisons between teacher-training and liberal arts colleges, it was found that students in teacher-training schools were considerably lower than liberal arts students in the scores they secured on nearly all tests.[16] Wood[17] also pointed out that, in a study of sophomores in various types of institutions, those who were preparing to teach received lower grades, on almost all tests except spelling, than those who hoped to become doctors, lawyers, or journalists.

[12] Ruggles, A. H. *Mental Health.* p. 98.
[13] Case, Florence. *A Quantitative Personality Study as an Approach to the Conditions of Mental Health among College Students.* p. 27.
[14] Yaukey, J. V., and Anderson, P. L. "A Review of the Literature on the Factors Conditioning Teaching Success." p. 512.
[15] Corey, S. M. "What Are the Factors Involved in the Success of High School Teachers?" p. 228.
[16] Wood, B. D. "Teacher Selection." p. 374.
[17] *Ibid.*, p. 375

Twenty-three per cent of the entering students at the Colorado State Teachers College in the fall of 1927 failed to complete their first year's work in college.[18] Approximately two thirds of these were in the lower half of the group in intelligence as measured by the Thurstone test, and less than one tenth were in the most intelligent group.

It is assumed that if the teacher-training institutions are willing to train, as teachers, individuals with average or less-than-average ability, they cannot expect more than an average or less-than-average quality of teaching.

Broom and others[19] have recommended that those candidates who are in the lowest 20 per cent with respect to aptitude rating should not be permitted to enter teacher training. This recommendation is in accord with the decision of the teachers colleges in Ohio, which are using the 20th percentile score on the Ohio Psychological Examination as the passing point for admission to teacher training.[20]

Proctor[21] concluded, as a result of his investigation, that it is necessary to have an I.Q. of 110 or better in order to do average or better-than-average work in college. In this connection, Darsie pointed out that only those individuals who have intelligence quotients of 120 or better should be directed into the teaching profession.[22]

As the selective admissions program was carried out at the Teachers College of Connecticut,[23] the average I.Q. of those selected for admission was raised five points within a period of five years. This means that the establishment of more rigorous requirements for admission brought about a marked increase in the general ability of the students who applied for admission to the institution and of those who were accepted.

While there are many who would question the use of intelligence quotients as a basis for admission to teacher training, since there are too many factors involved in success in teaching for anyone to be able to predict success by intelligence quotients alone, the consensus seems to be that the results of intelligence tests should be used as one of the factors in a program of selective admissions.

SCHOLARSHIP

Closely related to intelligence is the factor of scholarship. Educational writers maintain that the teacher impresses, teaches, and educates not only by what he is but also by what he knows. That success in teaching depends to a certain extent upon knowledge of the subject matter in the field taught is particularly true at the present time, due to the fact that the ever-increasing scope of elementary and secondary education makes new demands upon the scholastic equipment of the teacher.

Numerous studies have been made in an attempt to determine the relationship which exists between scholarship and teaching success. In a few cases investigators have called attention to the fact that some

[18] Frazier, G. W. "College Entrance: A New Plan." p. 74.
[19] Broom, M. E. "Intelligence and Teaching Success." pp. 422-6.
[20] Irwin, H. N. "Selective Admissions: Its Technics." p. 11.
[21] Proctor, W. M. "Psychological Tests and Guidance of High School Pupils." p. 59.
[22] Darsie, M. L. "A Method of Reporting the Significance of Intelligence Tests to Parents and Teachers." p. 600.
[23] Myers, A. F. "Problems in Teacher Training." pp. 21-2.

studies which report low correlations actually contain considerable evidence in support of scholarship as a determining factor in teaching success. In one case Butler[24] contrasted the supervised teaching grades received by his 60 best students with the grades received by the 60 poorest students. As a result of this study, Butler found that there was a marked relationship between general scholarship and the grade received in supervised teaching. However, the coefficient of correlation did not reveal the relationship which actually existed between the factors studied.

Additional evidence in support of scholarship as a determining factor in teaching success was reported by Stuit[25] as a result of his study conducted at the University of Nebraska. Despite the low correlation, as measured by the coefficient of correlation, there was evidence to show that the best teachers were superior students while in high school and college. Anderson,[26] Breckinridge,[27] Koos and Kefauver,[28] Landry,[29] Payne[30] and Wagenhorst[31] have reported results which are quite similar to those presented by Butler and Stuit. Kriner[32] found a correlation coefficient of .762 between scholarship in the upper half of the high school graduating class and success in teaching.

However, the results presented by some investigators seem to indicate that the student's ranking in his high school graduating class is not so reliable when used as a single index for predicting college achievement as it is when combined with other measures. Research workers suggest that perhaps it is better to use achievement test scores if a single measure of ability is to be used. The achievement test provides a means for assuring that those who enter the teacher-training institution are adequately prepared as far as scholastic achievement is concerned. In relation to qualifying examinations, one writer[33] made the statement that they are desirable in that they may guide a student into the field of teaching in which he would be best qualified or may even direct him into a vocation other than teaching. Both Ferrand[34] and Johnston[35] stated the belief that an examination as well as the record of a full school course, taken together, give a fairly adequate test of fitness.

Madsen[36] found, as a result of his investigation, that poor knowledge of subject matter is one of the outstanding causes for failure in teaching.

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[24] Butler, F. A. "Prediction of Success in Practice Teaching." pp. 448-56.
[25] Stuit, D. B. "Scholarship as a Factor in Teaching Success." pp. 382-4.
[26] Anderson, H. J. "Correlation between Academic Achievement and Teaching Success." pp. 22-9.
[27] Breckinridge, Elizabeth. "A Study of the Relation of Preparatory School Records and Intelligence Test Scores to Teaching Success." pp. 649-60.
[28] Koos, L. V., and Kefauver, G. N. *Guidance in Secondary Schools.* p. 265.
[29] Landry, H. A. "The Relative Predictive Value of Certain College Entrance Criteria." p. 259.
[30] Payne, E. S. "Scholarship and Success in Teaching." p. 219.
[31] Wagenhorst, L. H. "Relation between Ratings of Student Teachers in College and Success in First-Year Teaching." pp. 249-53.
[32] Kriner, H. L., *op. cit.*, pp. 54, 81.
[33] Bent, R. K. "Relationships between Qualifying Examinations, Various Other Factors, and Student Teaching Performance at the University of Minnesota." p. 251.
[34] Ferrand, W. "The Determination of Fitness for College." p. 595.
[35] Johnston, J. B. "Predicting Success or Failure in College at the Time of Entrance." p. 776.
[36] Madsen, I. N. "The Prediction of Teaching Success." p. 44.

School officials recognize the fact that training in and knowledge of subject matter are important to success in teaching and take this into consideration in employing teachers. Stuit[37] found, as a result of his study in teacher placement, that the prospective teacher must be above average in scholarship in order to be placed. Other writers have reported similar results.

In view of these facts, it seems desirable to have some information concerning the subject-matter preparation of the prospective teacher. No doubt a program of achievement testing would be quite worth while in selecting candidates for teacher training. Workers in the field of educational research have pointed that, while achievement test scores probably can never be used as an exact prediction of teaching success, it is possible that a minimum score may be established which could be used as a minimum requirement for admission to teacher training. Perhaps the determination of a minimum score could be accomplished by means of an experimental testing program.

PERSONALITY

A survey of educational literature reveals that in the past the teacher-training institutions have emphasized facts and knowledge at the expense of other requisites of success. The theory back of this emphasis has been that success depends, for the most part, upon the individual and that any capable person can become a successful teacher if he has the facts and the techniques.

Knowledge is recognized as a pertinent and determining factor in instructional efficiency; however, it does not assure one of success in the field of teaching. The results of recent investigations reveal the glaring gap which exists between training and actual performance on the job. Many young teachers who have acquired not only a satisfactory background of academic material but also a knowledge of the teaching techniques have failed because of certain personality defects.[38] Personal qualities that are essential to satisfactory performance—those which enable the individual to deal successfully with people—are also a vital factor in teaching success.

In the past, personality has been a more or less general term which implied either some undefinable trait or many vague characteristics of an individual. Today a healthy personality implies not only the attainment of physical strength and vigor but also the realization of the highest mental, emotional, spiritual, and social possibilities of the individual.

Numerous studies have been made to determine the relationship which exists between personality and instructional efficiency. Knowledge of subject matter has all too frequently been regarded as the end of training. Allen[39] pointed out that knowledge used to be considered most essential, but that today, with the newer aims and methods of teaching, the personal equipment of the teacher has become increasingly important.

[37] Stuit, *op. cit.*, pp. 382-4.
[38] Bruce, W. F. "Personality Development in Student Teachers." p. 191.
[39] Allen, H. P. "Earmarks of a Good Teacher." p. 26.

Odenweller[40] and other investigators firmly believe that personality is the most important single factor that makes for success or failure in teaching. However, the experimental evidence presented by Hertzberg,[41] Laycock,[42] and others is not entirely in harmony with this point of view.

Somers[43] suggested that the combination of tests and personality might well serve as supplementary data in determining a candidate's fitness for admission to teacher training.

If an individual has a reasonable amount of native ability, he can, by proper training, acquire the basic knowledge and methods in even the most technical lines of endeavor. However, the development of his personal qualities to the point where he can make effective use of the knowledge acquired is more difficult.

Iowa State College has carried on an experiment to see whether teaching personality can be acquired. Through the coöperative efforts of its teaching staff, this school attempted to develop its student teachers in traits of personality. Lancelot[44] stated that, as a result of this experimental program, there was a definite decrease among the beginning teachers in the number of failures in teaching due to personality defects.

Many attempts have been made to discover a practical, scientific approach to the measurement and development of personality, but little progress has been made. Perhaps the greatest hindrance to the accomplishment of such an undertaking has been the common misconceptions concerning the nature of personality.[45]

In the first place, personality has been regarded as something intangible and metaphysical, and therefore as something which cannot be measured and developed objectively. In the second place, it has been limited to include only the more desirable qualities. In the third place, personality has been regarded as something possessed by some individuals and not by others. Finally, it has been considered a sort of unit or trait in itself. Contrary to the common conception, personality is *not* a trait or entity in itself; it is a result or an effect which is brought about by the action and interaction of various traits or qualities.

Since personality is the composite result of a number of characteristics, both good and bad, it can be studied and measured if broken down into specific traits or abilities. In the process of analysis, the most significant factor is found to be the ability to get along with people, all other traits being more or less dependent upon this ability. In this connection, Anderson[46] made the statement that personal ability and techniques in handling people are fully as important as scholarship in successful teaching.

It is in the proper direction and control of personality as a composite of many traits that guidance obtains significance. The traits or qualities emphasized will depend, for the most part, upon the results

[40] Odenweller, *op. cit.*, p. 3.
[41] Hertzberg, O. E. "The Possible Halo Effect of Personality in Practice Teaching Grades." pp. 634-6.
[42] Laycock, S. R. "The Bernreuter Personality Inventory in the Selection of Teachers." pp. 59-63.
[43] Somers, *op. cit.*, p. 127.
[44] Lancelot, W. H. "Developing the Student-Teachers in Traits of Personality." p. 361.
[45] Hoopingarner, N. L. *Personality and Business Ability Analysis.* pp. 7-8.
[46] Anderson, E. W. "Personal Traits and Teacher Training from the Appointment Office Point of View." p. 795.

wanted. There are some traits or abilities which every individual needs regardless of his line of endeavor. There are other qualities which apply primarily to specific types of work, and people who have these qualities are better fitted than others for a particular kind of work.

Writers in the field of education do not always agree as to the personal characteristics that are essential to the successful teacher. However, there are certain characteristics which are included in those listed most often by educators, and these have been selected for consideration in this study. These have been chosen from the point of view of their significance in teaching success as judged by research workers in the field and are as follows: (1) impressiveness, (2) speech, (3) self-control, (4) thoroughness, (5) imagination, (6) decision, (7) adaptability, and (8) leadership.

Impressiveness.—Impressiveness is a more or less inclusive term. It involves such factors as physique, personal appearance, and manner, the combination of which factors enables the individual to influence those with whom he comes in contact. Impressiveness plays a very significant role in social relationships in that it helps a person win the respect of others—thus making for social leadership. Jervey[47] brings out the point that proper posture, dress, and general bearing help give an individual an inner consciousness of well-being which leads to success.

Research workers in teacher personnel are beginning to realize the significance of physique in determining instructional efficiency. Formerly, weight was the only physical trait given serious consideration. However proper proportion and balance are also emphasized today because, as Willoughby[48] has said, the relative proportions of the body are of greater significance from a physiological point of view than is weight.

Correct posture makes for ease and elasticity—thus giving the appearance of poise and balance rather than rigidity, tension, and self-consciousness. At the same time, good posture reduces fatigue because it keeps a proper balance among the various parts of the human machine.[49] The teacher who acquires a surplus of vitality is able to radiate happiness. The significance of this fact is revealed in the statement of a writer who pointed out that the prospective teacher should be rejected just as quickly for possessing a face that reflects chronic pessimism as for poor academic work or low intelligence quotient.[50]

Attractive personal appearance depends, for the most part, upon cleanliness and neatness. The teacher who fails to give his skin, teeth, nails, and hair proper attention is at a disadvantage in the classroom. He must be an example of healthful living; otherwise, he can hardly expect to develop in the students desirable habits, attitudes, appreciations, and ideals. Nor can he hope to progress in his work, for cleanliness is a pertinent factor in instructional efficiency.[51]

Good taste and neatness in dress pave the way for satisfactory social relationships. If the individual hopes to make a good impres-

[47] Jervey, M. "Meeting the Problems of Personal Grooming." p. 54.
[48] Willoughby, D. P. "An Anthropometric Method for Arriving at the Optimal Proportions of the Body in Any Adult Individual." p. 77.
[49] Lippitt, L. C. *Hygiene and Home Nursing.* p. 76.
[50] Walsh, M. J. *Teaching as a Profession.* p. 118.
[51] Reese, W. P. *Personality and Success in Teaching.* p. 87.

sion, he must select clothes which emphasize his strong points and conceal his weak points.

Bacon[52] made the statement that a well-dressed teacher expresses his personality through his appearance and is careful always to wear suitable and becoming clothes. In short, the well-dressed teacher is the one who can walk down the street without attracting undue attention. He has developed the art of adapting the style of the day to fit his individual personality.

Self-respect and self-confidence come with the assurance of being well-dressed. Self-confidence, a fearlessness of general criticism, is fundamental to individual initiative. Without self-assurance, the individual lacks that drive or power which is so essential to success. Thus, while being well-dressed adds to a teacher's personal appearance, it is also a part of that essential ratio which exists between happiness, personal ability, and instructional efficiency.[53]

Another factor in an effective teaching personality is an attractive manner, which will make a pleasing and lasting impression upon others and will enable the teacher to make and keep friends. Many promising young teachers with excellent abilities have failed because of the weakness of this factor. On the other hand, individuals with far less ability have moved forward simply because they were able to meet people. Sincerity of manner is a quality that paves the way for harmony in the classroom.[54]

Speech.—Speech serves as the avenue whereby the total personality expresses itself in social relationships and, next to impressiveness, is probably the most important factor in social relationships and personal adjustments. It is especially important in the field of teaching because there are an infinite variety of occasions when a teacher is called upon to use effective speech.[55]

Studies have been made to determine the present status of speech. Some of the results are quite enlightening. For example, Van Wye[56] found that less than half the students entering college in America have even passable speech and only about 10 per cent have good voices and clear-cut speech.

The quality of the voice and the nature of the speech may easily make for social maladjustment. A clear, well-modulated voice on the part of the teacher makes for a pupil-teacher relationship which is conducive to successful teaching and also gives the teacher a distinct advantage in social relationships. On the other hand, if the teacher possesses a harsh, shrill, nasal, muffled, or strident voice, it will undoubtedly arouse feelings of unpleasantness on the part of those with whom he comes in contact.

When the child enters school, his speech patterns are, for the most part, still in the formative stage. As a result, he imitates, either consciously or unconsciously, the speech of those with whom he comes in contact. Since he is under the teacher's influence five or six hours a day, he is more or less affected by the voice or speech of the teacher.

[52] Bacon, M. J. "My Clothes and I." p. 60.
[53] Dearborn, N. H. "Considerations in a Policy of Selective Admissions." p. 53.
[54] Bedell, F. J. "Your Personality." p. 242.
[55] Grieder, Calvin. "Speech Training for Prospective Teachers." p. 470.
[56] Van Wye, B. C. "The Efficient Voice in Speech." p. 647.

All is well so long as the child learns correct habits of speech; however, he does not discriminate between correct and incorrect habits. By the time he enters high school, his speech habits are rather well established. Nevertheless, he is still very much at the mercy of his teachers.

The teacher must be able to express himself clearly and vividly if he expects to stimulate interest in the ideas which he endeavors to communicate. He may possess a thorough knowledge of his subject matter; however, without a pleasing voice and careful articulation, he is unable to communicate his own appreciation and enthusiasm to his students. Yet teacher-training institutions have been very slow in recognizing the value of voice and speech tests for those who expect to enter the teaching profession.

Self-control.—It is necessary also that the teacher be a master of the "fine art of self-control," for, unless he is able to control himself, he can hardly expect to be able to control others. A teacher's reactions are often reflected in the behavior of the children.[57]

A person's emotional poise finds expression in such characteristics as sympathy, tolerance, and understanding. Certainly the teacher who is intolerant and lacks sympathetic understanding cannot expect to lead a group of students through to a successful goal. Respect is an asset which the teacher should rightfully deserve. Young people, for the most part, have respect for authority, but they do not admire physical or moral weaknesses and are very quick to detect behavioristic flaws in the teacher.

The two outstanding causes for the loss of self-control in the classroom are fear and anger—the fear of consequences that comes from inadequate preparation for teaching, and the anger that comes from taut nerves and causes the teacher to "fly off the handle." These causes have their origin in emotional weakness which may be the result of poor health. So again it seems that it might be well for the prospective teacher to keep in mind the fact that good health—physical, mental, and emotional—paves the way for instructional efficiency.

A good sense of humor is also a vital part of the teacher's personal equipment. Without this, the teacher seems to take himself too seriously, and permits a personal equation to enter into every problem that arises. Then, if he is also quite sensitive, he is kept in a more or less nervous state over the wrongs he is suffering.[58] As one writer[59] pointed out, a keen sense of humor makes it possible for many of the incidents in the classroom, which might otherwise loom to the greatness of tragedies, to become insignificant. In short, a sense of humor serves to keep the wheels of instruction running smoothly.

Thoroughness.—Thoroughness is a trait which is indispensable if the teacher expects to aid his students in establishing habits of accuracy and dependability in performing even the most tedious task. Although the teacher who is thorough gives due consideration to details, he at no time becomes so involved in details that he is unable to see the problem as a whole. He possesses a keen sense of discrimination—that power

[57] Prescott, D. A. "Emotion: Neglected Factor in Education." p. 462.
[58] Walsh, *op. cit.*, p. 123.
[59] Arnold, F. *Measurement of Teaching Personality.* p. 102.

to distinguish between the essential and the nonessential—and is able to organize his work and delegate responsibility. In this way he is able to direct the pupils to a more complete mastery of their school work.[60]

The thorough worker realizes that the successful leader must hold himself to standards of performance that are fully as high as those which he demands of others. He takes great pride in doing his work accurately and completely within a given period of time.

Imagination.—The really efficient teacher is not content merely to present subject matter to his students; he attempts to present it in new and interesting forms, thus suggesting new possibilities.[61] The ability to make facts live is one of the elements of good teaching.[62] Originality in presentation of material is more or less related to problem-solving and discovery. The teacher who possesses a creative imagination has ideas and is constantly working out new and more effective ways for meeting the needs of the students.

Decision.—Success in any field of endeavor is to a great degree proportionate to ability to make a decision and to hold to it after it has been made. Since teaching requires one decision after another in the classroom, the individual who finds it difficult to make and keep decisions should not enter the profession.[63] For such an individual, teaching would become a more or less constant nervous strain.

Although intelligence is an important factor in ability to think through a situation, any individual who conscientiously attempts to see and weigh all sides of a question is able to make considerable progress in the development of this quality.

Adaptability.—There is perhaps no phase of modern civilized living in which adaptability, a trait which is inextricably bound up with intelligence,[64] is not called into play. In the field of education, school administrators agree that lack of ability to adjust to social conditions is more often the cause of failure on the part of a teacher than is lack of knowledge of subject matter or methods of teaching.[65]

The successful leader is the one who can enter into the spirit of the social group in which he finds himself. This means that in the field of education the teacher must be able to put himself in the place of his pupils and look at things from their point of view. He must also be able to meet new problems as they are presented and to adjust to new situations.

The ability to adapt to the environment and to fit into the lives of those with whom he must associate, so as to cause friendship and confidence rather than misunderstanding, is an essential quality of a good teacher and should therefore be given consideration in selecting teacher-training candidates.

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[60] Charters, W. W., and Waples, Douglas. *The Commonwealth Teacher-Training Study*. p. 243.
[61] Copper, F. R. "Encourage Creative Imagination." p. 110.
[62] Otto, M. C. "Imagination and Teaching." p. 388.
[63] Reese, *op. cit.*, p. 69.
[64] Reese, *op. cit.*, p. 78.
[65] Crutchfield, E. L. "The Development of Leadership in Prospective Teachers." p. 362.

Leadership.—Closely related to adaptability is the personality trait known as leadership. The successful leader in any field of endeavor is the one who can work out with others the things they should do and can then influence them to do those things.

The first requisites for effective leadership are self-assurance, and a thorough knowledge of the requirements of the situation.[66] The teacher who constantly reveals through speech and acts his lack of self-confidence can hardly expect to win the respect and confidence of those with whom he associates. Other qualities that are necessary to the successful leader include tact, good judgment, initiative, and courage.[67]

Occasionally situations arise which necessitate skillful and accurate self-direction on the part of the teacher. The ability to give the advice needed in such situations is essential to effective leadership and to good teaching.

VOCATIONAL INTERESTS

Attempts to ascertain the factors which condition instructional efficiency have attached considerable significance to the interests of the teacher as well as to those of the pupil. In this connection, Stuit[68] made the statement that studies in the field show definitely that interests are a vital factor in the dynamics of human behavior and play an important part in both the educational and the vocational adjustment of the individual. The person who is without interest in his work often fails to make a success of his occupational life, for maladjustment makes for dissatisfaction and inefficiency.

As a result of his investigation, Kriner[69] found a marked difference between good and poor teachers in terms of the degree of interest in teaching which they recollected they had during their stay in high school. Dashiell[70] stated that, in predicting the probable success of a teacher, a study of interests was usually the best approach.

As a result of their studies, Knight,[71] Reinhardt,[72] Dearborn,[73] and Stuit and Corey[74] reported results which are quite similar to those presented by Kriner and Dashiell. Williamson and Darley[75] pointed out that the duty of high school counselors is to guide the vocational choices of students in conformity with their abilities and interests and also in the light of occupational trends and the demand for certain types of work. The value of proper guidance was clearly set forth in the results of Strong's[76] investigation in which he made a five-year follow-up study of a group of college seniors. He found that, five years after their graduation from college, only 60 per cent of the students studied were

[66] Smith, H. L., and Krueger, L. M. *A Brief Summary of Literature on Leadership.* p. 28.
[67] Crutchfield, *op. cit.*, pp. 362-3.
[68] Stuit, D. B. "A Study of the Vocational Interests of a Group of Teachers College Freshmen." p. 527.
[69] Kriner, *op. cit.*, pp. 69-70.
[70] Dashiell, J. F. "Personality Traits and the Different Professions." p. 201.
[71] Knight, *op. cit.*, p. 9.
[72] Reinhardt, E. "Probable Future Occupations of Freshmen in a Teachers College." pp. 200-7.
[73] Dearborn, *op. cit.*, p. 20.
[74] Stuit, D. B., and Corey, S. M. "Subject Matter Preparation of Secondary School Teachers: Factors Contributing to Teaching Success." pp. 492-3.
[75] Williamson, E. G., and Darley, J. G. "Trends in the Occupational Choices of High School Seniors." pp. 369-70.
[76] Strong, E. K. "Predictive Value of the Vocational Interest Test." pp. 331-49.

engaged in the occupation they had selected as seniors. This means that for 40 per cent of the students studied vocational readjustment was a necessity. Through the intelligent direction of a counselor, much of this waste of time and human effort could probably have been avoided.

An attempt was made to discover the specific motives which were instrumental in leading the students who were enrolled in student teaching at the University of Pittsburgh during the year 1932-33 to select the profession of teaching as their life's work. The results were quite disturbing. In fact, the study revealed that 114 of the 450 students were preparing to teach because they were financially unable to take the training for the vocation of their choice.[77] A similar study was made by Brown and Anderson[78] at the Kansas State Teachers College. They found that 58 per cent of the men and 42 per cent of the women in school there were not planning to make teaching their life work but were using it as a stepping-stone to some other vocation. As a result of her study, Reinhardt[79] also reported findings quite similar to those presented by Gould, and Brown and Anderson.

Experimental evidence presented by Wrenn[80] seems to indicate that the vocational interests of students who receive a high rating in general intelligence are more in keeping with their abilities than are those of students who receive a low intelligence rating. To the counselor, this means that a student's vocational choice must be considered in light of his general intelligence test score as well as his interests.

There are educators who would question the use of the interest factor in a program of selective admissions because such use makes for feelings of inferiority on the part of the student who is rejected. In response to this point of view, Sisson[81] made the statement that it is better to discourage or even disappoint some students who are entering training for their chosen vocation than it is to allow them to spend time, money, and energy in gaining an education in that field, only to find that there is little chance for them to become very successful in the work.

[77] Gould, George. "Motives for Entering the Teaching Profession." p. 102.
[78] Brown, E. G., and Anderson, D. "Vocational Expectations of Teachers College Students." p. 744.
[79] Reinhardt, *op. cit.*, p. 207.
[80] Wrenn, C. G. "Intelligence and the Vocational Choices of College Students." p. 219.
[81] Sisson, E. D. "Vocational Choices of College Students." p. 102.

Experimental Application of Certain Measures of Personal Qualifications of Teachers

In general, educators who have made studies of the personal characteristics of a good teacher are in agreement as to those qualities which are most essential. If the calibre of the teaching personnel is to be raised to the point where each member of the staff possesses these qualifications, candidates for admission to teacher training should be required either to meet the requirements or to have the ability to develop the necessary characteristics during their training period. Certain standards must be set up and certain tests given to determine the candidates' capacities.

In the literature concerning the qualities necessary to a successful teacher, certain characteristics are mentioned more frequently than others. These have already been discussed and have been selected as the factors to be investigated in an experimental study of the qualifications of a number of Indiana University students who were preparing to teach in the secondary schools in 1938-39.

The selection of measures to be used in the experiment has been the result of considerable study. In some cases recommendations of tests or other devices have been made by research workers who had conducted a particular study of one phase of teaching ability. In other cases the authors of the present investigation have examined various measures for a certain qualification and have made a selection as a result of this investigation. In still other cases, no satisfactory measure of a particular trait has been found and the authors have developed one to be used in this study.

A discussion of the investigation and the measures used follows.

EXPERIMENTAL CONDITIONS

The experimental conditions are as follows:

Subjects.—The subjects of this investigation were an unselected group of 47 sophomores (4 men and 43 women) at Indiana University who volunteered to participate in the study. Since the group was not a selected group, it was assumed that the subjects were typical of all teacher-training candidates at Indiana University. All subjects were enrolled in their first teacher-training courses at the time of the study and were preparing to teach in the secondary schools. The age distribution of these students is given in Table I and the major subject distribution is given in Table II.

Measuring procedure.—The subjects were given detailed information concerning the purpose of the study before any testing was done. Inasmuch as the students who participated in the investigation had volunteered to take the tests and had evidenced a great interest in the results of the study, it may be assumed that the scores they made represent their best efforts. All testing was done in a laboratory which was comfortable, well-lighted, and as free from objective distractions as

TABLE I. AGE OF THE SOPHOMORES WHO ACTED AS SUBJECTS IN THIS STUDY

Age	Number
18	5
19	14
20	23
21	1
22	0
23	1
24	2
25	1

TABLE II. MAJOR SUBJECTS TAKEN BY THE SOPHOMORES IN THIS STUDY

Major Subject	Number
Business	20
English	10
Home Economics	4
Language	2
Mathematics	1
Physical Education	2
Science	1
Speech	1
Social Studies	3
Music	3

possible. The group tests were given to not more than ten subjects at any one testing period in order to avoid the distractions that result from testing in large groups. Percentile ratings used for the raw scores on various tests were taken from the standards furnished by the publishers of the tests.

RESULTS

The results obtained from the administration of the various tests and measuring devices to the group of 47 sophomores are given below:

Health.—Unfortunately it was not possible to get health ratings on this group of 47 sophomores, due to the fact that necessary equipment was not available until too late for the results of the health examinations to be included in the study. However, certain suggestions are made concerning the selection of teacher-training candidates who are physically and mentally fit.

It is recommended that each prospective teacher be required to undergo at least three health examinations as a candidate for a teaching license: one at the time of entrance to teacher training, one prior to supervised teaching, and one prior to graduation. These examinations should be just as searching as those given for life insurance. They should include a complete examination of the skin, head and throat, heart, lungs, nervous system, and digestive system, and should be made by specialists rather than by the director of physical training. In addition, pertinent facts, such as previous illnesses, hereditary history, etc., should be obtained concerning candidates for teacher training. This information should be secured on regulation blanks such as those given on pages 24 and 25, one for the health record and one for the physical examination record—in order that the data on each student will be readily available.

PHYSICAL HEALTH RECORD[1]

Name.....Country of birth.....
Last First Middle

Address.....White or colored.....

Age..... Single, married, widowed, divorced.....

Are you subject to worries or moods, or periods of gloom and cheerfulness?.....

.....

Have you been ill with any of the following, and at what age?

Tuberculosis.....	Scarlet Fever.....	Frequent colds.....
Malaria.....	Diphtheria.....	Convulsive seizures.....
Rheumatism.....	Typhoid Fever.....	Nervous breakdown.....
Syphilis or Gonorrhea.....	Tonsilitis.....	Migraine or Neuralgia.....

Have you been protected against smallpox, typhoid, diphtheria, or other diseases by vaccination, and when?.....

Have you had any accidents, broken bones, or surgical operations?.....

.....

How often do you consult your dentist?..... When last?.....

Are your parents, brothers, and sisters living?.....

If not, what were the causes of death and at what ages?.....

.....

Do you remember any diseases in your family which may have affected your own health?.....

.....

Do you consider yourself in good health?..... If not, what is your complaint?.....

.....

Medical history:

[1] Rogers, J. F., *School Health Studies*. U. S. Bureau of Education, Department of Interior, 1926. pp. 32-3.

PHYSICAL EXAMINATION RECORD

Name..... Case No.....
Last First Middle

Height.....inches Weight (usual).....pounds
(present).....pounds

Figure..... Frame.....
Slender, medium, stocky, obese Light, medium, heavy

Skin.....

Teeth

	Right (Examinee's)	Left
U.	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
L.	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8

Indicate: restorable teeth by O; non-restorable teeth by /; missing natural by X

Eyes
Right..... Correctible to.....
Left..... Correctible to.....

Nose and throat (tonsils and adenoids).....

.....

Neck.....

Chest (respiratory system).....

Heart.....

Bones, joints, muscles.....

.....

.....

Legs..... Feet.....

Gastro-intestinal system.....

.....

Genito-urinary system.....

.....

Nervous system.....

.....

Remarks.....

.....

Remarks on defects not sufficiently described above.....

.....

.....

Corrective measures or other action recommended.....

.....

.....

Does the applicant for admission to teacher training meet the physical requirements?.....

Do you recommend acceptance with minor defects?..... If rejection is recommended, specify cause.....

.....

Place..... .....
Examining physician's signature

Date.....

The standards set up should include the proper functioning of the various organs of the body and freedom from disease of any kind. The detailed standards recommended are given in the summary on page 60. If these requirements are faithfully adhered to in admitting candidates into the teaching field, there is no doubt but that the health status of the teaching profession will be improved considerably.

Intelligence.—The test that is recommended for use in determining the candidate's ability is the American Council on Education Psychological Examination for College Freshmen. This test was devised and standardized by L. L. Thurstone and T. G. Thurstone for the purpose of ascertaining the scholastic ability of students entering college. Its reliability is .95 and its validity is satisfactory. The test is composed of five parts: namely, completion, arithmetic, artificial language, analogies, and opposites. Scores and percentiles derived from the American Council test should be interpreted in measures of aptitude rather than in measures of intelligence. The test, however, is considerd a good measure of the ability of the college freshman. The writers of this study recommend as a tentative standard that only those candidates who receive a percentile rating above 50 on the American Council on Education Psychological Examination should be admitted to teacher training unconditionally, while those whose ratings fall below 50 may be admitted on probation for one year. All entering students at Indiana University are given the American Council on Education Psychological Examination for College Freshmen. Therefore it was unnecessary to administer this test to the subjects used in the study, as the scores they made on the 1937 edition of the test, the preceding year when they entered as freshmen, could be secured from the records of the guidance office. The scores recorded for these sophomores on each section of the test, the total scores, and the corresponding percentile ratings are given in Table III.

The data in Table III show a wide range in ability for the 47 subjects. For completion, arithmetic, and artificial language, the median scores for the group are higher than the standard median. In general, those that were efficient on one part of the test were efficient on the other parts of the test. There are, however, exceptions to this general trend, as in a few cases subjects were particularly efficient on some one phase of the test and quite inefficient on some other phase.

A more adequate picture of the range in ability as measured by the American Council on Education Psychological Examination for College Freshmen may be seen in Table IV. A comparison of these scores shows that the efficiency of the fourth quartile (276.2) was 60.7 greater than that of the third quartile (215.5), a difference which is statistically reliable (Table IV). The difference of 43.25 between the mean scores for the second and third quartiles and the difference of 42.71 between those for the first and second quartiles are statistically reliable differences.

Table IV reveals the fact that the variability of scores as measured by the S.D. is approximately the same for the second and third quartiles when the total scores on this American Council test are considered. The least variability is found in the first quartile and the greatest in the fourth. Since a marked difference in efficiency exists among the four

groups, one is justified in making the statement that the American Council on Education Psychological Examination for College Freshmen reveals differences in ability and therefore is a valid measure for the selection of candidates for teacher training.

TABLE III. SCORES AND CORRESPONDING PERCENTILES WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION FOR COLLEGE FRESHMEN, 1937 EDITION

Student	Completion		Arithmetic		Artificial Language		Analogies		Opposites		Total	
	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile
1	50	95	20	48	54	84	38	77	84	96	246	88
2	28	40	20	48	64	93	36	69	54	66	200	69
3	16	15	8	16	23	38	32	51	39	34	118	18
4	50	95	44	90	80	99	38	77	63	80	275	94
5	44	88	24	58	74	93	46	98	78	93	266	93
6	12	7	22	54	35	64	39	83	30	25	138	31
7	34	67	44	90	15	11	28	35	48	53	169	50
8	40	81	52	96	64	93	48	99	45	51	249	89
9	30	54	36	81	55	85	34	60	54	66	209	73
10	30	54	32	74	47	78	30	43	45	51	184	59
11	18	20	32	74	33	59	30	43	42	40	155	41
12	20	23	22	54	76	98	34	60	64	81	216	75
13	32	59	36	81	40	70	18	20	39	34	165	48
14	32	59	32	74	49	81	36	69	51	59	195	66
15	32	59	28	68	67	95	4	2	30	25	161	45
16	36	40	36	81	53	83	33	59	57	71	205	71
17	32	59	16	37	54	84	33	59	37	30	172	53
18	38	76	52	96	45	76	48	99	66	84	249	86
19	34	67	28	68	45	76	28	35	66	84	201	69
20	32	59	12	25	37	66	30	43	24	10	135	27
21	16	15	4	9	29	52	38	77	36	29	123	22
22	12	7	16	37	31	56	34	60	51	59	144	34
23	58	99	64	99	75	98	44	96	72	89	313	99
24	48	92	44	90	84	100	48	99	84	96	308	98
25	38	76	16	37	31	56	30	43	69	87	201	69
26	56	99	48	93	78	99	44	96	69	87	295	97
27	44	88	20	48	27	48	32	51	48	53	171	52
28	32	59	24	58	26	45	38	77	60	74	180	57
29	50	95	16	37	56	88	30	43	81	95	233	83
30	22	29	1	0	30	55	38	77	66	84	156	41
31	18	20	24	58	20	32	30	43	27	14	119	19
32	26	40	8	16	27	48	14	11	51	59	126	23
33	50	95	64	99	76	98	54	100	57	71	301	98
34	20	23	12	25	12	11	30	43	48	53	122	21
35	44	88	36	81	43	74	42	90	78	93	243	87
36	28	46	20	48	32	57	38	77	42	40	160	44
37	16	15	8	16	38	67	34	60	30	25	126	23
38	30	54	12	25	50	82	38	77	51	59	181	58
39	30	54	44	90	22	37	36	69	60	76	192	63
40	18	20	24	58	24	39	28	35	42	40	136	28
41	60	99	52	96	56	83	40	84	84	96	292	97
42	38	76	32	74	56	83	40	84	75	90	241	86
43	46	91	24	58	50	82	28	42	66	84	214	74
44	42	84	32	74	50	82	32	51	60	76	216	75
45	30	54	32	74	60	90	36	69	69	87	227	80
46	20	23	16	37	14	10	36	69	51	59	137	29
47	34	67	32	74	54	84	40	75	57	71	217	76
Range	12-60		1-64		12-84		4-48		24-84		118-313	
Median	32.33		25.14		46.00		35.00		54.14		194.50	
Standard median*	30.32		22.33		24.73		34.18		54.35		167.08	
Mean	33.33		28.40		45.65		34.61		55.25		197.70	
S.D.											56.18	

*L. L. Thurstone and T. G. Thurstone. "Manual of Directions."

TABLE IV. RELIABILITY OF THE DIFFERENCES BETWEEN THE AVERAGE SCORES MADE BY EACH QUARTILE OF THE GROUP ON THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION FOR COLLEGE FRESHMEN, 1937 EDITION

	First quartile	Second quartile	Third quartile	Fourth quartile	First quartile	Third quartile	Second quartile	Fourth quartile
S.D.	8.37	12.70	13.15	25.60	8.37	13.15	12.70	25.60
S.D. Average	2.65	3.67	3.96	8.10	2.65	3.96	3.67	8.10
Average	129.54	172.25	215.50	276.20	129.54	215.50	172.25	276.20
Difference		42.71	43.25	60.70	146.66	85.96	43.25	103.95
S.D. Difference		4.53	5.40	9.02	8.52	4.76	5.40	8.89
Difference / S.D. Difference		9.43	8.01	6.73	17.21	18.06	8.01	11.69

The tentative standard set for the admission of a candidate to teacher training was based on the percentile ratings derived from the total score. A study of the total score percentiles of the 47 sophomores included in this study reveals that 31 (66 per cent) received percentile ratings of 50 or above, while 16 (34 per cent) received percentile ratings below 50. In other words, in light of our standard, 31 of the 47 sophomores would be admitted unconditionally to the teacher-training institution, and 16 would be admitted on probation for a period of one year.

The total score percentiles were arranged from highest to lowest and are plotted in Figure 1. The solid lines represent the subjects whose percentiles were above 50 and the broken lines those whose percentiles were below 50. The range in percentiles for those who would be admitted

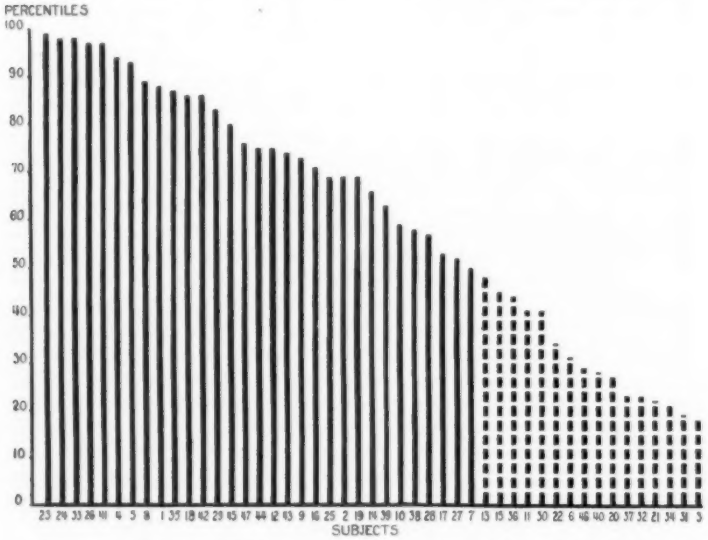

FIG. 1. Distribution of Percentiles Based on the Total Scores Made by the 47 Subjects on the American Council on Education Psychological Examination for College Freshmen, 1937 Edition.

unconditionally to teacher training is large, from 50 to 99, a difference of 49 between the lowest and the highest. The range of percentiles for those who, if admitted, would be admitted on probation is from 18 to 48, a difference of 30 between the lowest and the highest. If abilities as measured by the American Council on Education Psychological Examination for College Freshmen are important in the selection of candidates for teacher training, it would seem reasonable to deny those below the 50th percentile unconditional admittance to teacher training.

It is well to bear in mind in considering an individual's rating, however, that it is significant primarily as a guide in relation to the quality of work which he may be expected to do under "normal" conditions. The rating should *not* be interpreted as an indication of the student's native ability. Such factors as amount of general information, achievement in high school, habits of work, etc., undoubtedly affect one's performance on the American Council on Education Psychological Examination for College Freshmen. It is at once apparent that this test is subject to certain limitations. As a result, the data obtained should be considered in connection with other information concerning the individual student. That is, a student's admission to teacher training should not be based entirely on his performance on the American Council test.

Scholarship.—In admitting students, institutions for teacher training have adhered to the principle that future success is largely predicted on the basis of past success. Workers in the field of guidance maintain that the best single indication of future scholarship is past scholarship, and therefore high school scholarship is an excellent index for the prediction of scholastic accomplishment in college.

In view of these facts, it is recommended that only those candidates who rank in the upper half of their high school graduating classes and whose scores on the achievement tests are correspondingly good should be admitted unconditionally to teacher training. Candidates who rank in the lower 50 per cent of their high school graduating classes, and whose scores on the achievement tests are correspondingly low, may be admitted to teacher training on probation for one year.

The Sones-Harry High School Achievement Test is recommended for the purpose of determining the student's actual level of achievement, in order that he may be assigned to the proper training course. This test was devised and standardized by W. W. D. Sones and D. P. Harry. It covers four fields: (a) language and literature, (b) mathematics, (c) natural science, and (d) social studies. The validity of the test is high and the different parts show reliability coefficients of .86 or better.

Since the correct use of English is so essential in every phase of public school teaching, it is also advised that prospective students be given an aptitude test in this field. The Cooperative English Test, Form 1932, Series 2, which was selected for this purpose, was devised by N. F. Carpenter and others to measure aptitude in English. It is divided into two parts: I, usage and spelling, and II, recognition of vocabulary. The test has an odds-evens reliability coefficient of .99, and its validity is very satisfactory when combined with other measures of achievement.

The majority of the subjects ranked high in their graduating classes (Table V). In only one case did a subject rank below the middle of his graduating class, and 23, or 49 per cent, of the subjects were in the first four ranks. The wide differences in the size of the graduating classes are probably an important factor in evaluating ranks. For example, Subject 43 ranked first in a graduating class of 13, and Subject 33 ranked first in a class of 466. It is reasonable to assume that, under normal conditions, it would be easier to rank highest in a small class than in a large one.

If high school achievement constitutes a mirror of the university achievement, as some writers have stated, then an achievement rank in the upper 50 per cent of the graduating class seems to be a reasonable requirement for admission to teacher training. All but one of the 47 subjects ranked in the upper 50 per cent of their classes. Therefore, according to the standards set up in this study, 46 would be permitted to enter teacher training unconditionally.

The scores and percentile ratings made by each subject on the Sones-Harry High School Achievement Test, Form A, are given in Table V. An examination of these data shows that those subjects who scored high on one part of the test almost always scored high on the other parts of the test. There are, however, a few cases where subjects have been efficient on one part of the test and quite inefficient on another part. A comparison of the standard median with the median scores for the different parts of the test and for the total score shows that the median scores for the group were higher than the standard median in language and literature, natural science, social science, and total score. The median for the group for mathematics and the standard median are approximately the same.

The total scores on the Sones-Harry High School Achievement Test were arranged in order from highest to lowest and divided into quartiles. The average score for each quartile is given in Table VI. A comparison of these scores reveals that the efficiency of the fourth quartile (278) was 43.25 greater than that of the third quartile (234.75), a difference which has high statistical reliability. The difference of 26.71 between the mean scores for the second and third quartiles and the difference of 51.29 between the first and second quartiles are also statistically reliable differences.

Table VI reveals the fact that differentiation in relation to the variability of scores as measured by the S.D. is quite marked among the four groups. The least variability is found in the second quartile and the greatest in the fourth.

The total score percentiles of the Sones-Harry High School Achievement Test are plotted in Figure 2. The solid lines represent the subjects whose percentiles were above 50 and the broken lines those whose percentiles were below 50. The range in percentiles for those who would be admitted unconditionally to teacher training is from 54 to 99, a difference of 45 between the lowest and highest ranking subjects. The range in percentiles for those who would be admitted on probation is 10 to 46, a difference of 36 between the lowest and the highest ranking subjects.

TABLE V. RANK IN HIGH SCHOOL GRADUATING CLASS, AND SCORES AND CORRESPONDING PERCENTILES WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE SONES-HARRY HIGH SCHOOL ACHIEVEMENT TEST, FORM A

Student	Rank in high school graduating class		Language and Literature		Mathematics		Natural Science		Social Studies		Total	
	Rank	Number in class	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile
1	1	21	99	82	26	30	49	90	76	92	250	83
2	1	213	109	92	27	33	39	65	53	57	228	72
3	17	72	78	50	29	38	32	43	62	73	201	55
4	4	225	116	96	47	80	46	83	68	83	277	94
5	1	33	105	89	66	99	36	57	61	72	268	91
6	5	43	61	26	27	33	16	6	34	23	134	18
7	Up 1/2	18	83	60	68	99	50	91	75	91	276	93
8	4	185	89	70	48	82	42	73	71	86	250	83
9	17	225	89	70	43	73	37	60	51	53	220	67
10	2	20	112	94	39	65	45	80	57	64	253	84
11	81	255	72	41	32	45	34	50	42	37	180	42
12	Up 1/2	92	81	56	33	48	36	57	65	78	215	64
13	25	68	96	79	61	99	70	99	83	96	310	99
14	2	17	63	29	21	18	32	43	46	44	162	31
15	1	40	92	74	28	35	30	38	69	84	219	66
16	2	17	89	70	23	23	30	38	61	72	203	56
17	1	39	98	81	42	72	50	91	73	89	263	89
18	1	29	71	40	44	75	43	75	50	52	208	60
19	41	270	87	67	39	65	37	60	65	78	228	72
20	1	13	56	20	7	1	35	53	22	8	120	10
21	1	87	95	78	27	33	39	65	57	64	218	65
22	6	204	76	47	19	14	37	60	54	58	186	46
23	1	44	99	82	49	83	47	85	86	96	281	95
24	2	39	106	90	49	83	53	94	84	96	292	96
25	3	189	106	90	17	10	23	20	65	78	211	61
26	2	213	112	94	29	38	44	78	73	89	258	86
27	15	101	76	47	27	33	27	30	69	84	199	54
28	7	995	86	65	43	73	47	85	66	80	242	80
29	5	122	93	75	28	35	43	75	77	93	241	79
30	305	632	52	16	12	5	25	25	38	30	127	13
31	32	56	43	9	32	45	26	28	42	37	143	20
32	3	30	82	58	18	12	31	40	54	58	185	45
33	1	466	97	80	66	99	41	70	72	88	276	93
34	27	101	83	60	25	28	41	70	54	58	203	58
35	3	64	118	96	34	50	42	73	78	93	272	92
36	8	44	71	40	13	6	40	68	48	48	172	37
37	5	14	54	18	21	18	17	8	45	42	137	17
38	36	120	80	54	30	40	37	60	53	57	200	55
39	9	44	91	73	42	72	53	94	69	84	255	85
40	10	36	59	24	32	45	26	28	62	73	179	41
41	4	189	116	96	56	95	44	78	81	95	297	97
42	13	265	98	81	35	53	36	57	71	86	240	79
43	1	13	87	67	39	65	34	50	57	64	217	65
44	1	24	88	60	33	48	38	63	70	85	229	72
45	20	175	98	81	25	28	28	33	69	84	220	67
46	16	93	79	52	16	9	17	8	45	42	157	28
47	37	225	81	56	28	35	51	92	51	53	211	61
Range			43-118		7-68		16-70		22-86		120-310	
Median			88.00		30.86		38.45		63.00		217.38	
Standard Median*			78.00		34.00		34.00		49.00		192.00	
Mean			87.15		34.15		38.00		61.30		218.90	
S.D.											46.80	

* Sones, W. W. D., and Harry, D. P. "Manual of Directions," p. 9.

TABLE VI. RELIABILITY OF THE DIFFERENCES BETWEEN THE AVERAGE SCORES MADE BY EACH QUARTILE OF THE GROUP ON THE SONES-HARRY HIGH SCHOOL ACHIEVEMENT TEST, FORM A

	First quartile	Second quartile	Third quartile	Fourth quartile	First quartile	Third quartile	Second quartile	Fourth quartile
S.D.	22.90	6.66	12.06	45.00	22.90	12.06	6.66	45.00
S.D. Average	6.90	2.11	3.64	13.57	6.90	3.64	2.11	13.57
Average	156.75	208.04	234.75	278.00	156.75	234.75	208.04	278.00
Difference		51.29	26.71	43.25	121.25	78.00	26.71	69.96
S.D. Difference		7.22	4.21	17.25	18.21	7.80	4.21	16.99
Difference / S.D. Difference		7.10	6.34	2.51	6.66	10.00	6.34	4.12

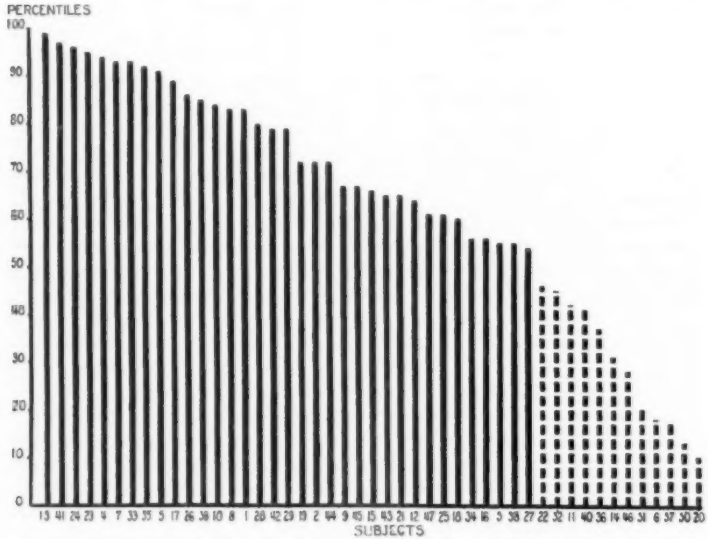

FIG. 2. Distribution of Percentiles Based on the Total Scores Made by the 47 Subjects on the Sones-Harry High School Achievement Test, Form A.

The Sones-Harry High School Achievement Test seems to be a valid measure in relation to the admission of candidates to teacher training in that it reveals marked differences in ability. A study of the scores made on the different parts of the test provides considerable information concerning the students' efficiency and should be of value for guidance purposes. The tentative standard set up for efficiency on this test was that those candidates whose total score was above the 50th percentile would be admitted unconditionally to teacher training and those whose score fell below the 50th percentile would be admitted for one year on probation. The percentile rating for 35, or 74 per cent, of the 47 subjects was above the 50th percentile. The 12 subjects who fell below the 50th percentile would be admitted to teacher training on probation for one year.

The scaled scores and the corresponding percentiles for the different parts of the Cooperative English Test, Form 1932, Series 2, and the total scaled scores and corresponding percentiles are given in Table VII. In relation to the published standard for this test, the subjects were well above the average in efficiency. There is a very definite tendency for those who did well on one part of the test to do well on the other parts. There are few exceptions to this general tendency.

TABLE VII. SCALED SCORES AND CORRESPONDING PERCENTILES WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE COOPERATIVE ENGLISH TEST, FORM 1932, SERIES 2

Student	Usage		Spelling		Vocabulary		Total	
	Score	Percentile	Score	Percentile	Score	Percentile	Score	Percentile
1	68	94	67	94	75	98	71	96
2	66	91	61	82	56	49	62	79
3	56	60	55	61	55	45	56	58
4	83	99	72	98	74	97	78	99
5	73	99	65	91	77	99	73	98
6	50	35	43	17	50	26	47	23
7	49	31	48	33	59	61	52	41
8	64	87	61	82	56	49	61	76
9	66	91	62	85	55	45	62	79
10	65	89	60	79	56	49	61	76
11	53	48	52	49	53	37	53	45
12	60	75	50	40	53	37	55	54
13	58	68	68	93	74	97	68	93
14	58	68	54	57	53	37	55	54
15	65	89	64	89	64	79	65	87
16	64	87	64	89	63	76	65	87
17	71	97	68	95	62	73	68	93
18	64	87	50	40	66	84	61	76
19	69	95	53	73	59	61	63	82
20	58	68	52	49	52	33	54	49
21	60	75	55	61	58	57	58	66
22	63	85	54	57	55	45	58	66
23	73	99	75	99	73	96	75	99
24	75	99	83	100	77	99	80	99
25	63	85	60	79	66	84	64	85
26	71	97	62	85	77	99	71	96
27	61	79	56	65	57	53	57	70
28	58	68	58	73	70	92	63	82
29	64	87	64	89	77	99	70	95
30	61	79	58	73	55	45	59	70
31	51	39	56	65	50	26	52	41
32	67	93	50	40	59	61	59	70
33	65	89	58	73	60	65	62	79
34	63	85	56	65	57	53	59	70
35	68	94	67	94	77	99	72	97
36	62	82	64	89	55	45	61	76
37	52	43	51	45	44	10	49	30
38	63	85	62	85	65	82	64	85
39	55	56	56	65	78	99	64	85
40	58	68	54	57	42	7	51	37
41	74	99	66	93	82	99	76	99
42	70	96	61	82	70	92	68	93
43	69	95	65	91	66	84	68	93
44	69	95	64	89	76	98	71	96
45	64	87	61	82	69	91	66	89
46	59	72	56	65	57	53	58	66
47	68	94	60	79	63	76	65	87
Range	49-83		43-83		42-82		47-80	
Median	63.45		59.14		61.13		62.67	
Standard median	54		52		56		54	
Mean	63.45		59.55		62.88		62.96	
S.D.							7.53	

The total scores on the Cooperative English Test were arranged in order from highest to lowest and divided into quartiles. The mean score for each quartile is set forth in Table VIII. A comparison of these scores shows that the average performance of the fourth quartile (73.7) was 8.24 greater than that of the third quartile (65.46), a difference which is statistically reliable. The difference of 4.66 between the mean scores for the second and third quartiles and that of 7.98 between the first and second quartiles are also statistically reliable differences.

The variability of scores on the Cooperative English Test, as measured by the S.D., is approximately the same for the second and third quartiles (Table VIII). The least variability is found in the second quartile and the greatest in the fourth. Although a difference in efficiency exists among the four groups, in no case was it so pronounced as that found on the American Council on Education Psychological Examination for College Freshmen. This does not mean necessarily that the Cooperative English Test is not as valid a measure as the American Council test, for it must be remembered that the students took the American Council test upon entering college but they had had nearly two years of work in English on the college level before taking the Cooperative English Test. This difference in years of training would undoubtedly affect the test results.

TABLE VIII. RELIABILITY OF THE DIFFERENCES BETWEEN THE AVERAGE SCORES MADE BY EACH QUARTILE OF THE GROUP ON THE COOPERATIVE ENGLISH TEST, FORM 1932, SERIES 2

	First quartile	Second quartile	Third quartile	Fourth quartile	First quartile	Third quartile	Second quartile	Fourth quartile
S.D.	2.86	1.54	1.87	3.23	2.86	1.87	1.54	3.23
S.D. Average	.90	.44	.54	1.08	.90	.54	.44	1.08
Average	52.82	60.80	65.46	73.70	52.82	65.46	60.80	73.70
Difference		7.98	4.66	8.24	20.88	12.64	4.66	12.90
S.D. Difference		1.00	.69	1.21	1.41	1.00	.69	1.17
Difference								
S.D. Difference		7.98	6.75	6.81	14.81	12.64	6.75	11.03

The total score percentiles for the Cooperative English Test, arranged from highest to lowest, are plotted in Figure 3. The solid lines represent the subjects whose percentile ratings were above 50 and the broken lines those whose percentile ratings were below 50. The range in percentiles for those who were above the 50th percentile is from 52 to 99, a difference of 47 between the lowest and highest ratings. The range in percentiles for those who were below the 50th percentile is from 23 to 49, a difference of 26 between the lowest and highest ratings. Although the scores on the three parts of the test, usage, spelling, and vocabulary, undoubtedly are valuable in determining the kind of remedial training necessary in English, the tentative standard for admission to teacher training is based on the percentile derived from the total scores. An examination of these percentiles shows that 40, or 85 per cent, of the subjects have a percentile rating of 50 or above and seven have a rating below 50. Therefore, on the basis of

this test, 40 of the subjects would be admitted unconditionally to teacher training and seven would be admitted for one year on probation. Only two of the 47 subjects, Subject 6 (percentile rating 23) and Subject 37 (percentile rating 30), may be considered as definitely deficient in English as measured by this test.

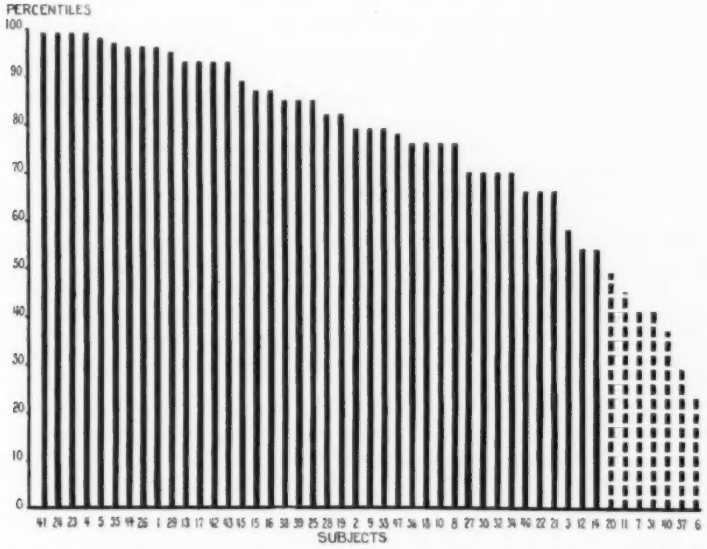

FIG. 3. Distribution of Percentiles Based on the Total Scores Made by the 47 Subjects on the Cooperative English Test, Form 1932, Series 2.

Of the ten students who made the lowest scores on the Cooperative English Test, six also made scores which placed them below the 50th percentile on both the American Council on Education Psychological Examination for College Freshmen and the Sones-Harry High School Achievement Test; and four of these six were among the ten who ranked lowest in their high school graduating classes. On the other hand, of the ten who ranked highest on the Cooperative English Test, six also ranked among the ten highest on each of the other tests and four of these fell within the group of ten who ranked highest in their high school graduating classes. According to these data, nearly half the students maintained the same general rank in comparison with the rest of the group on all four tests. For them, there is little question as to whether or not admission to teacher training should be conditional. The problem arises when those who rank very differently on the various tests are considered. Should they be admitted conditionally if they fall very low on only one of the tests? Should the average of their tests be considered instead of each grade separately? Should one test be given more emphasis than another in determining their eligibility for admission? These and many other questions arise concerning the tests.

Personality.—Although the personal equipment of the prospective teacher can be developed, it is less modifiable than subject matter and theory. Therefore, those responsible for the training of teachers must set up rigorous standards so that only those candidates who possess the necessary qualities may be permitted to enter teacher training.

In order to have a practical basis upon which to proceed, ability must be broken down into its major elements, although all factors must be taken into consideration if a unified picture of the individual's ability is to be obtained. The phases of personality to be considered (as mentioned in Chapter II) are impressiveness, speech, self-control, thoroughness, imagination, decision, adaptability, and leadership.

Two measures of personality are recommended for use in studying the personal characteristics of prospective teachers. These are the Bernreuter Personality Inventory and the Bell Adjustment Inventory. However, these should be used with caution, since personality testing is a relatively new field and experimental evidence has shown that as yet one cannot put the utmost faith in the results of such measures.

The first of these inventories was devised by R. G. Bernreuter for the purpose of measuring four distinct personality traits: neuroticism, self-sufficiency, introversion-extroversion, and dominance-submission. The reliability coefficients of the measure range from .85 to .92 and the validity is high.

The adjustment inventory was devised by Hugh M. Bell. It provides four separate measures: home adjustment, health adjustment, social adjustment, and emotional adjustment. The reliability coefficient of this inventory as a whole is .93 and that of each of its parts ranges from .80 to .89. The validity is high.

Since neither of these inventories includes a thorough rating of impressiveness, a rating scale for this characteristic was devised by the authors for this purpose. A copy of the scale is shown on page 39.

Speech is another personal trait for which there is no adequate measurement included in either the Bernreuter or the Bell scales. Therefore the speech record blank used by the Indiana University Speech and Hearing Clinic was used in this investigation. This record blank is shown on page 40.

RATING SCALE FOR IMPRESSIVENESS

Name of Student.....Date.....

Impressiveness may be described as that combination of qualities which enables the individual to stimulate favorably those with whom he comes in contact. It includes such factors as physique, personal appearance, and manner. Impressiveness is considered essential in social relationships.

The standards below provide a basis for rating the individual on impressiveness.

Please exercise *utmost care* in rating the individual on the items presented.

Physique: : : : : : : : : : : :

Marked under or over-weight for height and age Lack of symmetry of proportion in constituent parts of the body	Weight deviates somewhat from average for height and age Symmetry of proportion does not exist in all constituent parts of the body	Average weight for height and age Attractive build Physically well proportioned

Please record here evidence which supports your judgment

Posture of Individual: : : : : : : : : : : :

Awkward in appearance Round-shouldered and hollow-chested Wears high-heeled shoes Stilted walk	Poor posture—too stiff or too relaxed Shoes run over at the heels Walk gives the impression of being lazy or indifferent	Physically well-poised Posture erect and graceful Relaxed and springing step Wears shoes with medium-height heels

Please record here evidence which supports your judgment

Personal Cleanliness: : : : : : : : : : : :

Skin in unhealthy condition (pimples) Dirty hair, skin, hands, nails and teeth Nails sharply pointed or highly colored Breath offensive Evidence of body odors No consideration for personal appearance	Grooming carelessly done Improper care of the nails Evidences of perspiration Lack of proper attention to skin Careless about personal appearance	Skin in healthy condition Clean hair, skin, hands, nails and teeth Nails filed so as to conform to the shape of the finger tips Takes pride in personal appearance

Please record here evidence which supports your judgment

Neatness in Dress: : : : : : : : : : : :

Clothes give the appearance of slovenliness Hair unkempt No consideration to choice and use of cosmetics Colors and design emphasize the individual's deviations from the average such as under or overweight; extremely short or tall Wears clothes in keeping with styles of another day Shoes sadly in need of polish; run over at the heels	Clothes untidy Hair arrangement unnatural Cosmetics carelessly applied Poor choice of colors and design—fail to emphasize color of eyes, hair or skin Clothes not always in keeping with the occasion Clothes neat, but lack style Shoes in fair condition, but style attracts attention to individual's foot size	Clothes neat and clean Hair simply but neatly arranged Cosmetics moderately used and attractively applied Colors harmonize— emphasize color of eyes, hair, or skin Wears mostly tailored or sport clothes Adapts present styles to individual needs Shoes polished; in good repair

Please record here evidence which supports your judgment

Manner: : : : : : : : : : : :

When conversing with an individual, he appears to be ill at ease or evasive Is "down and out" when things are not going well Is rude; antagonistic in dealings with others Appears to be deceitful	When conversing with an individual, he occasionally appears to be ill at ease Occasionally gives way to his feelings Boisterous; now and then considers the rights of others One questions his sincerity in light of what he says and does	When conversing with an individual he "looks the person in the eye" "Keeps his spirits up even though things go wrong" Is courteous; respects the rights of others Is sincere in what he says and does

Please record here evidence which supports your judgment

Since the Indiana University Speech and Hearing Clinic administered the hearing test (group audiometer) in connection with the speech test, the results are discussed here rather than as a part of the health tests. The record blank used is one regularly used by the Clinic. (See page 40.)

INDIANA UNIVERSITY SPEECH AND HEARING CLINIC

Sponsored by Psi Iota Xi FILE NO.....

SPEECH RECORD FOR VOICE AND ARTICULATORY ANALYSES

Name..... (last) (first) Sex M..F.. Race W..C.. Age..../..... Gr..... Date.....

County.....Town.....School.....Exam.....

I. TYPE OF DEFECT:

a. Organic:
__teeth
__lips
__tongue
__paralysis
__cleft
__growths
__jaw
__hearing

b. Rhythmic:
__stuttering
__arhythmia
__rapid rate

c. Functional:
__substitution {lisping, foreign, other}
__indistinct {inactivity, inaccuracy}
__omission {infantile, jargon}
__delayed

d. Vocal:
__duration {nasal
__pitch {denasal
__volume {muffled
__quality {metallic, harsh, breathy, hoarse}

II. TESTS:

a. Comprehension of spoken language: Superior.....Good.....Fair.....Poor.....
b. Conversational Speech: Excel.....Good.....Fair.....Poor.....Very Poor.....
c. Audiometer: Group: R.....L..... Pitch: Oct: R.....L..... Speech: R.....L.....
d. Vocal Motor Ability: tongue 12345 lips 12345 jaw 12345 diaphragm 12345

III. SOUND RETRAIN ORDER:

1.....
2.....
3.....
4.....
5.....
6.....
7.....
8.....
9.....
10.....
11.....
12.....

IV. SPEECH SOUND DIFFICULTIES:

Snd	IN	ME	FI	Snd	Syl	Wrd
s						
z						
th						
t/h						
r						
l						
w						
wh						
j						
ch						
sh						
k						
g						
f						
v						
ng						
nt						
nq						

V. CONDITION OF:

1. Tonsils:
ok.....
enlarged.....
very enlarged.....

2. Teeth:
ok.....
spaced.....
malformed.....

3. Jaw:
ok.....
overbite.....
underbite.....
malocclusion.....

4. Palate:
ok.....
high.....
very high.....
partial cleft.....
complete cleft.....
par rprd cleft.....
repaired cleft.....

5. Lips:
ok.....
cleft.....
repaired cleft.....

6. Tongue:
ok.....
tied.....
macroglossi.....

NAME

FILE NO.

VI. COMMENTS:

VII. PROGNOSIS:

HEARING TEST Form B

Sponsored by Psi Iota Xi

Name..... Sex.....

Grade..... Age..... Room.....

School.....

Date.....

Town.....

DO NOT MAKE ANY NOISE AS IT WILL SPOIL THE TEST

(1) Write your name, age, grade, etc. in the spaces above.

(2) You will hear numbers spoken by a person who is moving away from you. The voice will get weaker and weaker. Listen carefully and write as many numbers as you can.

Hearing LINE	RIGHT EAR				LEFT EAR				Hearing LINE
	1	2	3	4	5	6	7	8	
30									30
27									27
24									24
21									21
18									18
15									15
12									12
9									9
6									6
3									3
0									0
-3									-3
	Hearing Line.....				Hearing Line.....				

HISTORY

1. Did you ever have an ache or pain in your ear?..... Which ear?..... When?.....
2. Did you ever have a running ear?..... Which ear?..... When?.....
3. Does it run now?.....
4. Do you ever have noises in your ear, like buzzing, hissing, or roaring?..... Which ear?..... When?.....
5. Have you ever had your tonsils or adenoids removed?.....
6. Who in your family does not hear well?.....
7. Have you ever had a mastoid operation?.....
8. Have you a cold now?.....
9. Do you have a cold often?.....
10. Do you sleep with your mouth open?.....

The scores made by each of the 47 sophomores on the Bernreuter Personality Inventory are given in Table IX. While no definite conclusions can be drawn from these data, indications are that those students who received percentile ratings below 50 on the American Council on Education Psychological Examination for College Freshmen are as stable on the traits measured by the Bernreuter Personality Inventory as are

those who received ratings of 50 or above; however, the low ability group seems to rate higher on the dominance-submission trait than the high ability group.

When the high and low ability groups are compared on the other traits measured by the test, the difference between the two groups is negligible. According to the standards set up for the Bernreuter scale, subjects having a rating of 96 or above on any part of the scale are

TABLE IX. PERCENTILE RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE BERNREUTER PERSONALITY INVENTORY

Student	Neuroticism rating	Self-sufficiency rating	Introversion-extroversion rating	Dominance-submission rating
1	16	60	7	67
2	59	2	42	30
3	62	49	54	45
4	98	0	93	2
5	67	2	62	30
6	16	38	11	88
7	50	71	47	61
8	13	67	15	84
9	47	4	7	39
10	35	11	38	42
11	2	87	2	90
12	2	79	4	96
13	2	57	100	75
14	41	17	34	67
15	80	25	81	52
16	21	11	21	56
17	23	31	18	64
18	2	25	2	84
19	0	79	1	96
20	97	0	100	0
21	45	56	58	86
22	35	90	34	84
23	98	15	98	3
24	94	4	85	14
25	100	3	100	0
26	5	38	5	88
27	3	38	3	93
28	13	67	7	73
29	13	64	12	88
30	37	41	27	24
31	88	6	86	19
32	45	41	34	67
33	93	89	91	12
34	49	4	46	26
35	8	85	7	86
36	88	25	83	52
37	39	17	30	56
38	5	83	11	96
39	45	85	50	67
40	16	85	21	76
41	85	90	83	16
42	3	74	5	80
43	71	9	54	36
44	35	52	34	73
45	2	83	5	99
46	41	25	24	39
47	41	25	24	60
Range	0-100	0-90	1-100	0-99
Median	39	38	34	64
Mean	43	43	43	53

deficient in the trait or traits. If the 95th percentile is accepted as the upper limit of unconditional admittance to teacher training, 43 subjects (90 per cent) would be admitted unconditionally on neuroticism, all 47 subjects on self-sufficiency, 43 subjects on introversion-extroversion, and 43 subjects on dominance-submission.

TABLE X. RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE BELL ADJUSTMENT INVENTORY*

Student	Home rating	Health rating	Social rating	Emotional rating
1	E	G	A	A
2	A	U	A	U
3	E	A	U	A
4	A	VU	A	U
5	A	G	A	A
6	E	A	E	A
7	A	A	G	A
8	A	A	G	A
9	U	U	A	A
10	U	A	A	A
11	G	A	G	G
12	G	G	E	G
13	E	G	G	E
14	G	U	A	A
15	U	U	A	U
16	G	E	E	G
17	G	A	E	G
18	A	G	A	G
19	G	E	E	E
20	VU	U	U	VU
21	A	A	E	A
22	A	U	G	A
23	A	U	A	U
24	A	A	A	U
25	G	U	G	G
26	U	A	U	VU
27	A	A	E	A
28	E	A	E	E
29	A	G	A	G
30	G	G	A	A
31	U	U	U	VU
32	A	G	A	A
33	A	VU	VU	U
34	A	G	A	U
35	A	G	A	A
36	VU	A	A	U
37	A	A	G	A
38	U	U	E	A
39	U	A	A	A
40	U	U	A	A
41	G	VU	A	A
42	G	E	G	E
43	VU	A	U	A
44	A	VU	G	U
45	G	G	G	G
46	E	G	A	G
47	G	VU	G	A
SUMMARY				
E	6	3	9	4
G	12	12	11	9
A	21	16	21	21
U	8	11	5	9
VU	3	5	1	3

*E=excellent; G=good; A=average; U=unsatisfactory; VU=very unsatisfactory.

The scores made by each of the 47 subjects on the Bell Adjustment Inventory are given in Table X. It will be noted that the results obtained on the two inventories are very much in harmony. According to the standards set up for the test, subjects rated as U, unsatisfactory, and as VU, very unsatisfactory, on any part of the test are poorly adjusted. According to the standards of this study, those subjects poorly adjusted are denied unconditional admittance to teacher training.

A brief study of the results shown in Table X reveals that, of the 47 sophomores included in this study, 11 tend to be unsatisfactorily adjusted to their home surroundings and would be admitted to teacher training only on probation; 16 seem to be unsatisfactorily adjusted with regard to health; six tend to be submissive and retiring in their social contacts; and 12 have tendencies toward neuroticism.

Impressiveness was measured at a group meeting of the 47 subjects. Each of the sophomores included in the study was provided with three rating scales, each bearing the name of another member of the group. Thus each student rated three members of the group and was rated by three members. According to the scale, each of the five traits (physique, posture, personal cleanliness, neatness in dress, and manner) could be rated on a ten-point scale. The ratings were not to be in terms of good, fair, and poor, because what one student might consider good, another student who was more critical might regard as only fair. The subjects were therefore asked to use the relative-position method in rating the three designated individuals.

After the students had read the instructions carefully, a few minutes were allowed them for asking any questions that might arise. When it was clear that they understood what was wanted of them, they were told to proceed with the rating. No names were signed to the rating scales. The resultant ratings of each of the 47 sophomores were then examined.

In an attempt to facilitate computation, each set of ratings was transferred to numerical scores on the ten-point scale ranging from 0 to 100, with 100 being the highest possible score. The next step was to combine the three independent ratings for each individual into a single rating. Consequently, the final relative arrangement is not the result of any one individual judgment; it is the product of the ratings of three judges. The value of the combined rating lies in the fact that the bias of any single person who served as a judge did not operate unduly to influence the final result.

The results of the pooled judgments are given in Table XI. It may be noted that the spread or range between the poorest and the best student with regard to impressiveness was large. Of the 23 who received ratings below the median of the group on impressiveness, ten received ratings on the American Council on Education Psychological Examination for College Freshman that were correspondingly low. Interestingly enough, the individuals who received ratings below 50 on the three tests already discussed also received the lowest ratings on impressiveness. These facts seem to indicate that there exists a rather marked relationship between an individual's scholastic ability and his ability to stimulate favorably those with whom he comes in contact.

TABLE XI. RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE IMPRESSIVENESS SCALE DEVELOPED AT INDIANA UNIVERSITY

Student	Physique rating	Posture rating	Personal cleanliness rating	Neatness in dress rating	Manner rating	Average rating of five elements
1	73	80	77	80	73	77
2	82	83	92	83	82	84
3	83	77	67	67	83	75
4	58	78	78	93	80	77
5	70	75	67	85	80	75
6	58	83	70	88	88	77
7	90	83	90	90	80	87
8	80	90	92	88	70	84
9	93	92	92	93	87	91
10	67	67	77	60	73	69
11	77	72	78	75	83	77
12	43	60	53	65	62	57
13	85	85	65	62	87	77
14	63	77	78	70	72	72
15	65	62	85	73	73	72
16	87	73	90	87	80	83
17	72	72	90	95	87	83
18	72	73	83	75	83	77
19	75	80	90	85	80	82
20	62	43	63	52	73	59
21	78	63	70	70	85	73
22	85	95	90	90	90	90
23	82	77	88	85	78	82
24	62	57	82	77	67	69
25	83	83	83	87	78	83
26	83	53	93	88	88	81
27	78	78	68	73	83	76
28	83	95	92	92	82	89
29	77	80	80	77	83	79
30	93	77	97	90	90	89
31	92	78	85	75	72	80
32	88	88	83	88	93	88
33	73	77	80	80	83	79
34	90	77	82	80	92	85
35	87	83	87	90	85	86
36	55	77	90	90	78	78
37	62	62	72	77	73	69
38	83	83	73	83	70	78
39	77	80	82	70	87	79
40	53	38	48	42	62	49
41	42	68	72	62	65	62
42	80	93	80	93	93	88
43	80	60	87	90	78	79
44	62	58	77	78	73	70
45	67	53	73	68	70	66
46	78	80	75	80	85	80
47	80	80	90	90	80	84
Range	42-93	38-95	48-97	42-95	62-93	49-91
Median	80	60	87	90	78	79
Mean	75	73	59	78	79	78

In that the scale used to measure impressiveness was not standardized, the writers arbitrarily decided that those making an average score of 70 or above on the five parts of the scale would be admitted unconditionally to teacher training and those making below 70 would be admitted on probation. Of the 47 subjects, 39 (83 per cent) made a total score of 70 or above and would therefore be admitted unconditionally.

The speech and hearing tests were administered by the Indiana University Speech and Hearing Clinic.[1] The director of the Clinic summarized the measurements, giving a rating of A to those students who apparently had no deficiencies; B to those students who had slight defects, but were above average; C to those students who were thought to have remedial defects; and D to those students who had serious defects and for whom there was some doubt as to whether they should be permitted to enter teacher training under any conditions.

The speech rating for each of the 47 subjects is given in Table XII. Of the 47 sophomores included in this study, 12 (26 per cent) secured A ratings in speech, while nine (19 per cent) secured C ratings. Besides these nine, as many as 26 (55 per cent) of the sophomores gave evidence of slight speech defects.

The test results seem to indicate that, with regard to the quality of voice, nine of the subjects had defects which would in all probability detract from the effectiveness of their work as teachers. These nine subjects who passed the test with a C rating should be denied unconditional admission to teacher training.

TABLE XII. RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE SPEECH TEST OF THE INDIANA UNIVERSITY SPEECH AND HEARING CLINIC

Student	Rating	Student	Rating
1	A	26	A
2	A	27	B
3	B	28	B
4	B	29	B
5	A	30	B
6	A	31	C
7	B	32	C
8	B	33	B
9	B	34	A
10	C	35	A
11	B	36	A
12	B	37	C
13	B	38	C
14	B	39	C
15	A	40	C
16	B	41	B
17	B	42	A
18	B	43	C
19	A	44	C
20	B	45	B
21	B	46	B
22	A	47	B
23	B		
24	B		
25	B		

The hearing rating for each subject is given in Table XIII. An examination of the data in this table reveals that 40 of the subjects, 85 per cent, were free from hearing defects; four subjects, 8 per cent, had slight hearing defects; and three passed the hearing test with only a C rating, which indicated that their hearing was quite defective. These last three should be denied unconditional admission to teacher training.

[1] Dr. Robert Lloyd Milisen is Director of the Indiana University Speech and Hearing Clinic.

It is interesting to note that three of the seven subjects who had defective hearing also had defective speech. However, none of the subjects fell in the lowest classification in either speech or hearing.

TABLE XIII. RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE HEARING TEST OF THE INDIANA UNIVERSITY SPEECH AND HEARING CLINIC

Student	Rating	Student	Rating
1	A	26	A
2	A	27	B
3	A	28	A
4	A	29	A
5	A	30	B
6	A	31	A
7	A	32	C
8	A	33	A
9	A	34	A
10	A	35	A
11	A	36	A
12	B	37	A
13	A	38	A
14	A	39	C
15	A	40	C
16	A	41	A
17	A	42	A
18	A	43	A
19	A	44	A
20	B	45	A
21	A	46	A
22	A	47	A
23	A		
24	A		
25	A		

Vocational interests.—Studies of the teacher's interest in his work have received surprisingly little of the research worker's attention, yet interest has been considered a valuable factor in guidance. Although such experimental evidence as is available is controversial concerning the degree of positive correlation between interest in his work and measures of teaching success, nevertheless, it is assumed that measures of interest possess at least guidance value in recommending a candidate's admission to teacher training.

With these facts in mind, the writers set up the following tentative standard: Only those candidates who possess a high level of native ability and give evidence of interest in teaching, as measured by standardized tests, shall be admitted to teacher training unconditionally.

Two tests are suggested for use in guidance in this respect; one is a measure of teaching ability and the other of general vocational interest.

The Coxe-Orleans Prognosis Test of Teaching Ability was designed by W. W. Coxe and J. S. Orleans to measure the individual's ability to learn the subject matter taught in teacher-training institutions. The five parts of the test measure the candidate's general information, professional interest, knowledge of teaching methods and practices, ability to learn and comprehend the kind of material included in professional books in teacher training courses, and ability to study and work out educational problems.

Experimental testing programs reveal the test to be fairly dependable, the coefficients of correlation between the test scores and achievement at the end of the first school year ranging between .54 and .84. The value of the Coxe-Orleans test for predicting school achievement has been demonstrated. The extent to which it is prognostic of actual teaching ability has not, as yet, been determined.

TABLE XIV. SCORES AND CORRESPONDING PERCENTILES OF TOTAL SCORES WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE COXE-ORLEANS PROGNOSIS TEST OF TEACHING ABILITY, FORM A

Student	Score on Part I	Score on Part II	Score on Part III	Score on Part IV	Score on Part V	Total	
						Score	Percentile
1	64	58	69	55	55	301	88
2	50	56	73	59	52	290	80
3	53	56	63	41	48	261	53
4	57	66	74	52	61	310	92
5	45	84	75	60	57	321	96
6	41	54	72	45	48	260	52
7	56	48	68	60	49	281	72
8	53	72	75	52	52	304	90
9	52	65	78	57	53	305	90
10	61	60	66	54	58	299	86
11	49	41	73	48	48	259	51
12	62	50	66	32	52	262	54
13	71	63	65	50	58	307	91
14	47	70	73	45	55	290	80
15	58	54	63	50	62	296	85
16	57	64	69	53	40	283	74
17	54	70	68	55	56	303	89
18	56	60	72	53	60	301	88
19	54	82	61	50	54	301	88
20	37	62	72	50	53	274	65
21	63	58	75	47	45	288	78
22	57	68	74	55	60	314	94
23	60	60	70	57	58	305	90
24	67	70	70	64	53	330	90
25	61	50	61	48	55	275	66
26	64	58	74	59	53	308	91
27	60	72	63	49	45	289	79
28	53	60	74	57	50	294	83
29	61	67	80	52	57	317	95
30	40	62	72	46	54	274	65
31	52	50	68	45	59	274	65
32	55	58	59	48	59	279	70
33	54	70	73	50	64	311	93
34	50	44	64	50	56	264	56
35	58	78	77	59	54	326	97
36	50	44	49	45	42	230	23
37	41	72	76	47	54	290	80
38	48	62	63	52	47	272	63
39	62	60	81	53	62	318	95
40	46	50	57	45	54	252	44
41	70	73	77	59	54	333	99
42	58	54	78	57	48	295	84
43	5	64	70	53	45	290	80
44	68	70	75	54	61	328	98
45	53	80	80	58	63	334	99
46	38	44	74	52	51	259	51
47	53	74	79	47	50	303	89
Range	37-71	41-84	49-81	32-64	40-64	230-334	
Median	55.25	61.75	71.81	52.45	53.80	294-25	
Standard median*						258-00	
Mean	54.67	61.92	70.53	51.80	53.62	292-45	
S.D.						23.55	

*Coxe, W. W., and Orleans, J. S. "Manual of Directions." p. 9.

The Strong Vocational Interest Blank, devised by E. K. Strong, has been standardized for some 36 different occupations. A student's score on this test is a measure of how nearly his pattern of interests coincides with that of the average individual successfully engaged in the occupation. The average reliability of 21 scales is .89. The inventory differentiates among the various occupations. The inventory should be used with caution because much work needs to be done to perfect it. It has great possibilities as a tool in guidance, but as yet it should not be taken wholeheartedly.

The raw scores for each part of the Coxe-Orleans Prognosis Test of Teaching Ability, together with the total scores and corresponding percentile ratings, are given in Table XIV. Standard percentile ratings and standard medians for the different parts of the test are not given by the publishers. The five parts of this test are designed to measure the following: Part I, general information; II, professional interest; III, lessons in education; IV, reading comprehension; and V, problems in education. The data in Table XIV show that there is considerable fluctuation in scores from one part of the test to another.

The total scores on the Coxe-Orleans Prognosis Test of Teaching Ability were arranged in order from highest to lowest, and then these 47 scores were divided into four groups. The mean score for each quartile is given in Table XV. These scores represent the average performance of the groups on this test. A comparison of these scores shows that the efficiency of the fourth quartile (321) was 19.92 greater than that for the third quartile (301.08), a difference which is statistically reliable (Table XV). The difference of 15.38 between the mean scores for the second and third quartiles and the difference of 23.94 between those of the first and second quartiles are statistically reliable differences.

TABLE XV. RELIABILITY OF THE DIFFERENCES BETWEEN THE AVERAGE SCORES MADE BY EACH QUARTILE OF THE GROUP ON THE COXE-ORLEANS PROGNOSIS TEST OF TEACHING ABILITY, FORM A

	First quartile	Second quartile	Third quartile	Fourth quartile	First quartile	Third quartile	Second quartile	Fourth quartile
S.D.	11.97	5.28	3.91	8.84	11.97	3.91	5.28	8.84
S.D. Average	2.67	1.76	1.13	3.61	2.67	1.13	1.76	3.61
Average	261.76	285.70	301.08	321.00	261.76	301.08	285.70	321.00
Difference		23.94	15.38	19.92	59.24	39.32	15.38	35.30
S.D. Difference		3.20	2.09	3.78	4.49	2.90	2.09	4.02
Difference		7.48	7.36	5.27	13.19	13.56	7.36	8.78
S.D. Difference								

An examination of Table XV reveals that the greatest variability in scores as measured by the S.D. is found in the first quartile, and the least variability is found in the third quartile. It is interesting to note that the Coxe-Orleans Prognosis Test of Teaching Ability does not seem to reveal differences in ability as well as the American Council on Education Psychological Examination for College Freshmen or the Sones-Harry High School Achievement Test. However, if the test had been

given to college entrants, the results might have been quite different. No doubt work in college is a conditioning factor in an individual's performance on the test.

An analysis of the individual scores on each part of the Coxe-Orleans test should be valuable in the organization of the teaching program in providing the type of instructional material most needed by the individuals. The proposed standard for efficiency on this test is, however, based on the total score percentile ratings. An examination of the percentile ratings in Table XIV shows that 45 of the subjects, 96 per cent, are above the 50th percentile and, according to the standards set up, would be admitted unconditionally to teacher training. Only two subjects, 4 per cent, fell below the 50th percentile and would be admitted for one year on probation.

The total score percentiles of the Coxe-Orleans Prognosis Test of Teaching Ability, arranged from highest to lowest, are plotted in Figure 4. The solid lines represent the 45 subjects who would be admitted to teacher training unconditionally and the broken lines the two subjects who would be admitted on probation for a year. The range in percentiles for those who would be admitted unconditionally to teacher training is 51 to 99, a difference of 48 between the lowest and highest ranking subjects. The range for those who would be admitted on probation is 23 to 44, a difference of 21 between the two low-ranking subjects. If the Coxe-Orleans test measures that which it proposes to measure, only two of the 47 subjects show a lack of aptitude in teaching activities.

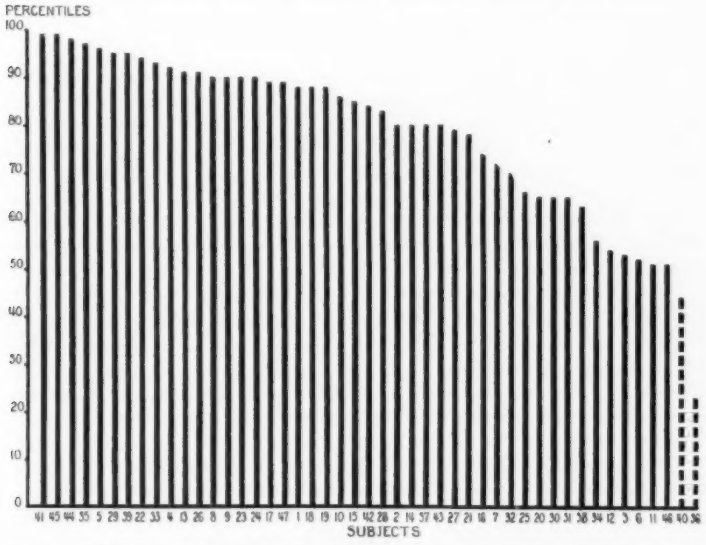

FIG. 4. Distribution of Percentiles Based on the Total Scores Made by the 47 Subjects on the Coxe-Orleans Prognosis Test of Teaching Ability, Form A.

The Strong Vocational Interest Blank was administered by the Testing Bureau of the Guidance Division at Indiana University. One form of this interest blank is designed for men and one form for women. Letter ratings were obtained for each subject on interest in teaching as measured by the test, and these are given in Table XVI.

TABLE XVI. RATINGS WHICH WERE OBTAINED BY THE 47 SOPHOMORES ON THE STRONG VOCATIONAL INTEREST BLANK

Student	Rating	Student	Rating
1	B	26	B+
2	B+	27	C
3	C	28	B
4	C+	29	B—
5	B—	30	B—
6	B—	31	B+
7	B—	32	B—
8	C	33	B
9	C	34	C
10	C	35	A
11	B+	36	C
12	B—	37	C+
13	A	38	C
14	C+	39	A
15	B—	40	C
16	C+	41	A
17	B—	42	B+
18	B	43	C
19	B—	44	B—
20	C	45	B+
21	B—	46	A—
22	B—	47	C
23	B+		
24	B		
25	C		

The ratings in Table XVI show that, of the 47 sophomores included in this study, five (11 per cent) secured A ratings in the vocation chosen as their life's work. There were 17 (36 per cent) who secured ratings of C+ or C in their chosen vocation, and, according to the standards set up, would be denied unconditional admission to teacher training. However, in considering an individual's rating in interest, it is well to bear in mind the fact that it should not be accepted without question. Such factors as differences in age and experience undoubtedly affect the results.

Personnel workers maintain that more suitable vocational choices are made by students who are high in academic intelligence than by students low in such intelligence. For purposes of comparison, the group of sophomores was divided into two groups on the basis of the ratings obtained on the American Council on Education Psychological Examination for College Freshmen. These data are given in Table XVII.

Only three (ten per cent) of the highly intelligent group secured A ratings on the vocation chosen as their life's work (indicating harmony of interest pattern with that of individuals successfully engaged in teaching) as compared with two (12.5 per cent) of the low intelligence group. Eleven (36 per cent) of the high score group secured

TABLE XVII. DISTRIBUTION OF RATINGS IN TEACHER INTEREST FOR HIGH AND LOW ABILITY GROUPS ON THE STRONG VOCATIONAL INTEREST BLANK

Group	Number	Rating on teacher interest					
		A	B+	B	B−	C+	C
High ability	31	3	5	5	7	3	8
Low ability	16	2	2	0	6	1	5

ratings of C+ or below on the vocation chosen, while six (37.5 per cent) of the low group secured C or C+ ratings on the vocation chosen. Of the highly intelligent group, 17 (55 per cent) secured B ratings on interest in teaching as compared with eight (50 per cent) of the low intelligence group. These data indicate that, as far as interest in teaching is concerned, as measured by the Strong Vocational Interest Blank, those of low ability were approximately as interested in teaching as were those of high ability.

Comparison of scores when subjects are grouped according to teaching subject.—In order to determine whether there is a difference in the efficiency of the sophomores who are preparing to teach in one field and those who are preparing to teach in some other field, the mean raw scores on the American Council on Education Psychological Examination for College Freshmen, Cooperative English Test, Sones-Harry High School Achievement Test, and Coxe-Orleans Prognosis Test of Teaching Ability for each of the teaching subjects of the 47 sophomores were obtained. These are given in Table XVIII.

TABLE XVIII. COMPARISON OF MEAN TEST SCORES OF THE VARIOUS GROUPS ON EACH OF THE FOUR STANDARDIZED TESTS

Group	Number of subjects	American Council on Education Psychological Examination for College Freshmen	Sones-Harry High School Achievement Test	Cooperative English Test	Coxe-Orleans Prognosis Test of Teaching Ability
Business	20	188	208.5	61	283
English	10	228	248	68	302
Home Economics	4	186	202	62	281.5
Languages	2	204.5	224	62	292
Mathematics	1	301	276	62	311
Music	3	197	199	64	297
Physical Education	2	190.5	262	61.5	284.5
Science	1	135	120	54	274
Social Studies	3	212	235	67	327
Speech	1	144	186	58	314

In only two teaching subjects, business and English, are the number of candidates sufficient for comparative purposes. According to the data in this table, the average efficiency of the ten sophomores whose teaching subject was English was considerably above that of the average score for the 20 sophomores who had selected business as their teaching subject. However, for the most part, the results of this study are

in harmony with those reported by Boardman[2] who carried on a study in the College of Education of the University of Minnesota; that is, indications are that academic groups tend to stand above the vocational or special groups in scores made on educational tests.

Comparison of sophomore results with those of a group of seniors.—As has been pointed out, a number of methods have been suggested for the improvement of teacher training. The approach to the problem taken in this study is that teacher training may be improved through the selection of more desirable candidates. If, however, after two years in the university there is marked improvement in the student's efficiency as measured by the tests used in this study, selection is not as important and vital a problem as is the training. An approach to an evaluation of the teacher-training program is to compare the scores made by the sophomores on these standardized tests and other forms of measurement with the scores of a group of seniors on the same tests.

An unselected group of 13 seniors taking supervised teaching were given the same series of tests as were given the sophomores. The conditions under which these tests were given to the seniors were as nearly as possible the same as when the tests were given to the sophomores.

Of the 13 seniors in the group, three were men and ten were women. Their ages ranged from 21 to 25. One of the subjects had taken a major in art, one in English, one in home economics, one in music, one in science, two in language, three in physical education, and three in social studies.

TABLE XIX. SCORES MADE BY THE SOPHOMORES AND THOSE MADE BY THE SENIORS ON FOUR STANDARDIZED TESTS

Examination	Group	Range	Median	Mean	S.D.
American Council on Education Psychological Examination for College Freshmen	Sophomore	118-313	194.50	197.70	56.18
	Senior	114-297	208.00	211.65	52.95
Sones-Harry High School Achievement Test	Sophomore	120-310	217.38	218.90	46.80
	Senior	109-309	235.50	219.50	69.82
Cooperative English Test	Sophomore	47-80	62.97	62.96	7.53
	Senior	50-75	68.00	64.58	9.40
Coxe-Orleans Prognosis Test of Teaching Ability	Sophomore	230-334	294.25	292.45	23.55
	Senior	243-361	318.00	318.60	28.90

Table XIX gives the range in scores, median, mean, and S.D. for both the senior and sophomore groups on the American Council on Education Psychological Examination, the Sones-Harry High School Achievement Test, the Cooperative English Test, and the Coxe-Orleans Prognosis Test of Teaching Ability. It must be remembered that the American Council test was given to both the sophomore and senior groups when they were freshmen. On the other three tests there was a difference of two years in the amount of training of the two groups.

[2] Boardman, C. W. "Qualifying Examinations as a Technic for Selecting Students in Education." p. 102.

The data in Table XIX show that the scores made on these tests by the two groups are approximately equal; that is, there is little difference between the scores made by the sophomores, who were taking their first course in teacher training, and those made by the seniors, who were taking their final course (Supervised Teaching). The difference in scores made by the two groups on the Coxe-Orleans test indicates that two years of university training does improve the efficiency on this test. In view of the nature of the test, however, it seems rather remarkable that there would not have been a greater difference between the average scores of the sophomores and the seniors.

Another approach to the evaluation of the teacher-training program is that of comparing the per cent of sophomores who passed each test with a score sufficiently high to permit them to be admitted unconditionally to teacher training with the per cent of seniors who were admitted unconditionally. These data are given in Table XX.

According to this table, approximately the same percentage of sophomores as of seniors would be admitted unconditionally on the basis of the results on the American Council on Education Psychological Examination for College Freshmen, the Bernreuter Personality Inventory, the Bell Adjustment Inventory, the speech and hearing tests, the Coxe-Orleans Prognosis Test of Teaching Ability, and the Strong Vocational Interest Blank. A higher percentage of the sophomores than of the seniors ranked in the upper 50 per cent of their graduating classes, and a higher percentage of the sophomores would also be admitted on the basis of their scores on the Cooperative English Test and the Sones-Harry High School Achievement Test. On the impressiveness scale, 100 per cent of the seniors would be admitted unconditionally as compared with only 83 per cent of the sophomores.

TABLE XX. NUMBER AND PER CENT OF SOPHOMORES AND SENIORS ADMITTED TO TEACHER TRAINING UNCONDITIONALLY ACCORDING TO THE VARIOUS MEASURES USED IN THIS STUDY

Measure	Sophomores (47)		Seniors (13)	
	Number	Per cent	Number	Per cent
American Council on Education Psychological Examination for College Freshmen	31	66	8	62
Rank in high school graduating class	46	98	9	69
Sones-Harry High School Achievement Test	35	74	8	62
Cooperative English Test	40	85	9	69
Bernreuter Personality Inventory*—				
Neuroticism	43	91	13	100
Self-sufficiency	47	100	12	92
Introversion-extroversion	43	91	13	100
Dominance-submission	44	94	10	77
Bell Adjustment Inventory*—				
Home rating	36	77	9	69
Health rating	31	66	10	77
Social rating	41	87	13	100
Emotional rating	35	74	13	100
Impressiveness Scale	39	83	13	100
Speech Test	38	81	10	77
Hearing Test	44	94	11	85
Coxe-Orleans Prognosis Test of Teaching Ability	45	96	12	92
Strong Vocational Interest Blank	30	64	9	69

*Since the various parts of these inventories rate factors that are more or less unrelated, a total score is meaningless. Therefore each part is listed here separately.

It would seem reasonable to place greater emphasis on those tests and measuring devices for which the reliability and validity have been established, and less emphasis on those for which the reliability and validity are questionable. However, the percentage of students given unconditional admission according to the results of the Strong Vocational Interest Blank is very similar to the percentage admitted on the basis of the American Council on Education Psychological Examination for College Freshmen, yet it is generally agreed that it is not as well standardized as the American Council test. In general, therefore, a comparison of the number admitted on the more standardized scales with those admitted on the scales which were less standardized indicates that the standardization or lack of standardization was not an important factor in determining the number to be admitted or rejected.

If the results obtained from the small sampling of sophomores and seniors studied are typical of the group of students entering their work in teacher training and those graduating from teacher-training institutions, the data presented in Table XX would lead to the conclusion that a selection of superior candidates is as valuable as superior training, if not more so, in raising the level of the teaching personnel.

Summary, Conclusions, and Recommendations

FROM a survey of the literature concerning the traits and characteristics of a successful teacher and the standards of admission set up by various teacher-training institutions, a number of desirable teacher qualifications were selected, a series of tests and rating scales for the measurement of these factors was selected, and tentative standards were determined for a program of selective admissions in teacher-training institutions.

The traits and characteristics selected for study were those mentioned most often by educators who had written on the subject of teacher qualifications. These included: (1) health, (2) scholarship, (3) intelligence, (4) personality, and (5) vocational interests. Scholarship, as studied in this investigation, included both rank in high school graduating class and rating on a scholastic achievement test, and personality included (*a*) impressiveness, (*b*) speech, (*c*) self-control, (*d*) thoroughness, (*e*) imagination, (*f*) decision, (*g*) adaptability, and (*h*) leadership. In measuring personality, however, impressiveness and speech were the only traits measured individually—the others were included in the personality scales given.

The following tests and measuring devices were selected for use in the experiment:

1. Health
   (Because equipment arrived too late for the results to be used in the study, this factor had to be omitted from the investigation.)
2. Intelligence
   American Council on Education Psychological Examination for College Freshmen, 1937 Edition
3. Scholarship
   Rank in the graduating class of the high school
   Sones-Harry High School Achievement Test, Form A
   Cooperative English Test, Form 1932, Series 2
4. Personality
   Bernreuter Personality Inventory
   Bell Adjustment Inventory
   Impressiveness scale developed by the authors of the study
   Speech and hearing tests used by the Indiana University Speech and Hearing Clinic
5. Vocational Interests
   Coxe-Orleans Prognosis Test of Teaching Ability, Form A
   Strong Vocational Interest Blank

The subjects used in this study were an unselected group of 47 sophomores who were enrolled in their first teacher-training course at Indiana University. The various tests listed above were administered to these subjects and the results were studied in the light of tentative

standards to be set up for the admission of candidates to teacher-training institutions. For purposes of comparison, 13 seniors were also given the tests as a check to see whether two years of university work seemed to increase efficiency in the traits measured.

SUMMARY OF TEST RESULTS

Although the group of subjects tested is so small that definite conclusions cannot be based on the results, and the reliability and validity

TABLE XXI. RANK POSITIONS OF EACH SOPHOMORE ON EACH OF THE FOUR STANDARDIZED TESTS USED IN THIS STUDY

Student	American Council on Education Psychological Examination for College Freshmen	Sones-Harry High School Achievement Test	Cooperative English Test	Coxe-Orleans Prognosis Test of Teaching Ability
1	9	14.5	8	20
2	22	20	24	27.5
3	47	33.5	38	42
4	6	5	2.5	10
5	7	9	5	5
6	38	44	47	43
7	31	6.5	43.5	33
8	8	14.5	28.5	14.5
9	19	22.5	24	14.5
10	26	13	28.5	22
11	35.5	38	42	44.5
12	16.5	27	39.5	41
13	32	1	12.5	11.5
14	24	40	39.5	27.5
15	33	24	16.5	23
16	20	31.5	16.5	32
17	29	10	12.5	17.5
18	11.5	30	28.5	20
19	22	20	21.5	20
20	41	47	41	37
21	44	25.5	36	31
22	37	36	36	8
23	1	4	2.5	14.5
24	2.5	3	2.5	14.5
25	22	28.5	19	35
26	4.5	11	8	11.5
27	30	35	32.5	30
28	28	16	21.5	25
29	13	17.5	10	6.5
30	35.5	46	32.5	37
31	46	43	43.5	37
32	42.5	37	32.5	34
33	2.5	6.5	24	9
34	45	31.5	32.5	40
35	10	8	6	4
36	34	40	28.5	47
37	42.5	45	46	27.5
38	27	33.5	19	39
39	25	12	19	6.5
40	40	39	45	46
41	4.5	2	2.5	1.5
42	11.5	17.5	12.5	24
43	18	25.5	12.5	27.5
44	16.5	20	8	3
45	14	22.5	15	1.5
46	39	42	36	44.5
47	15	28.5	26	17.5

of a number of the measuring devices used may be questioned, the results of the testing program present some interesting data.

The rank of each subject on the American Council on Education Psychological Examination for College Freshmen, the Sones-Harry High School Achievement Test, the Cooperative English Test, and the Coxe-Orleans Prognosis Test of Teaching Ability is given in Table XXI. Thus, this table shows the consistency of performance of the subjects on the four relatively well standardized measures used in this study.

An examination of these ranks shows that those subjects who were highly efficient were relatively constant in maintaining their position on the four tests, and those students who were quite inefficient were also relatively constant. However, there is a great deal of variability in the ranks of the middle group.

Intercorrelations among the four measures used in this study are shown in Table XXII. It will be noted that the relationship among these measures, as expressed by the r, is rather marked. In other words, these measures more or less overlap. The factor of general intelligence is involved not only in high school achievement but also in the ability to observe teaching practices and to learn educational material. The same is true with regard to English aptitude. The closest relationship among these measures was found to exist between the American Council on Education Psychological Examination for College Freshmen and the Cooperative English Test, the coefficient of correlation being .78; a somewhat smaller correlation coefficient, .66, was found to exist between the Sones-Harry High School Achievement Test and the Coxe-Orleans Prognosis Test of Teaching Ability.

TABLE XXII. CORRELATION COEFFICIENTS BETWEEN THE FOUR STANDARDIZED TESTS USED IN THIS STUDY

Measure	Correlated with Measures					
	2		3		4	
	r	PE	r	PE	r	PE
1. American Council on Education Psychological Examination for College Freshmen	.78	± .04	.76	± .05	.65	± .05
2. Cooperative English Test			.75	± .04	.69	± .05
3. Sones-Harry High School Achievement Test					.66	± .06
4. Coxe-Orleans Prognosis Test of Teaching Ability						

The data in Table XXIII show the measures on which each of the sophomores would be admitted to teacher training unconditionally or on probation according to the standards arbitrarily set up. (The various parts of the Bernreuter Personality Inventory and the Bell Adjustment Inventory have been considered as separate units.) The letter A indicates that the subject met the standard of unconditional admission to teacher training and the letter R means that he was refused unconditional admission. For example, Subject 1 attained or exceeded the standard on all 17 measures. On the other hand, Subject 31 attained the standard on only six of the measures and was rejected on 11 of the measures. These data raise a very important question in relation to the admission of candidates to teacher training on this basis when a

standards to be set up for the admission of candidates to teacher-training institutions. For purposes of comparison, 13 seniors were also given the tests as a check to see whether two years of university work seemed to increase efficiency in the traits measured.

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Although the group of subjects tested is so small that definite conclusions cannot be based on the results, and the reliability and validity

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1	9	14.5	8	20
2	22	20	24	27.5
3	47	33.5	38	42
4	6	5	2.5	10
5	7	9	5	5
6	38	44	47	43
7	31	6.5	43.5	33
8	8	14.5	28.5	14.5
9	19	22.5	24	14.5
10	26	13	28.5	22
11	35.5	38	42	44.5
12	16.5	27	39.5	41
13	32	1	12.5	11.5
14	24	40	39.5	27.5
15	33	24	16.5	23
16	20	31.5	16.5	32
17	29	10	12.5	17.5
18	11.5	30	28.5	20
19	22	20	21.5	20
20	41	47	41	37
21	44	25.5	36	31
22	37	36	36	8
23	1	4	2.5	14.5
24	2.5	3	2.5	14.5
25	22	28.5	19	35
26	4.5	11	8	11.5
27	30	35	32.5	30
28	28	16	21.5	25
29	13	17.5	10	6.5
30	35.5	46	32.5	37
31	46	43	43.5	37
32	42.5	37	32.5	34
33	2.5	6.5	24	9
34	45	31.5	32.5	40
35	10	8	6	4
36	34	40	28.5	47
37	42.5	45	46	27.5
38	27	33.5	19	39
39	25	12	19	6.5
40	40	39	45	46
41	4.5	2	2.5	1.5
42	11.5	17.5	12.5	24
43	18	25.5	12.5	27.5
44	16.5	20	8	3
45	14	22.5	15	1.5
46	39	42	36	44.5
47	15	28.5	28	17.5

of a number of the measuring devices used may be questioned, the results of the testing program present some interesting data.

The rank of each subject on the American Council on Education Psychological Examination for College Freshmen, the Sones-Harry High School Achievement Test, the Cooperative English Test, and the Coxe-Orleans Prognosis Test of Teaching Ability is given in Table XXI. Thus, this table shows the consistency of performance of the subjects on the four relatively well standardized measures used in this study.

An examination of these ranks shows that those subjects who were highly efficient were relatively constant in maintaining their position on the four tests, and those students who were quite inefficient were also relatively constant. However, there is a great deal of variability in the ranks of the middle group.

Intercorrelations among the four measures used in this study are shown in Table XXII. It will be noted that the relationship among these measures, as expressed by the r, is rather marked. In other words, these measures more or less overlap. The factor of general intelligence is involved not only in high school achievement but also in the ability to observe teaching practices and to learn educational material. The same is true with regard to English aptitude. The closest relationship among these measures was found to exist between the American Council on Education Psychological Examination for College Freshmen and the Cooperative English Test, the coefficient of correlation being .78; a somewhat smaller correlation coefficient, .66, was found to exist between the Sones-Harry High School Achievement Test and the Coxe-Orleans Prognosis Test of Teaching Ability.

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Measure	Correlated with Measures					
	2		3		4	
	r	PE	r	PE	r	PE
1. American Council on Education Psychological Examination for College Freshmen	.78	± .04	.76	± .05	.68	± .05
2. Cooperative English Test			.75	± .04	.69	± .05
3. Sones-Harry High School Achievement Test					.66	± .06
4. Coxe-Orleans Prognosis Test of Teaching Ability						

The data in Table XXIII show the measures on which each of the sophomores would be admitted to teacher training unconditionally or on probation according to the standards arbitrarily set up. (The various parts of the Bernreuter Personality Inventory and the Bell Adjustment Inventory have been considered as separate units.) The letter A indicates that the subject met the standard of unconditional admission to teacher training and the letter R means that he was refused unconditional admission. For example, Subject 1 attained or exceeded the standard on all 17 measures. On the other hand, Subject 31 attained the standard on only six of the measures and was rejected on 11 of the measures. These data raise a very important question in relation to the admission of candidates to teacher training on this basis when a

TABLE XXIII. RESULTS OBTAINED FROM THE APPLICATION OF THE 17 PROPOSED STANDARDS FOR ADMISSION OF CANDIDATES TO TEACHER TRAINING TO THE GROUP OF 47 SOPHOMORES*

Student	Measure																	Total A's	Total R's
	American Council on Education Psychological Examination for College Freshmen	Rank in high school graduating class	Sones-Harry High School Achievement Test	Cooperative English Test	Bernreuter Personality Inventory†				Bell Adjustment Inventory‡				Impressiveness Scale	Speech Test	Hearing Test	Cone-Orleans Prognosis Test of Teaching Ability	Strong Vocational Interest Blank		
					1	2	3	4	1	2	3	4							
1	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
2	A	A	A	A	A	A	A	A	A	R	A	R	A	A	A	A	A	15	2
3	R	A	A	A	A	A	A	A	A	A	R	A	A	A	A	A	R	14	3
4	A	A	A	A	R	A	R	A	A	R	A	R	A	A	A	A	R	12	5
5	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
6	R	A	R	R	A	A	A	A	A	A	A	A	A	A	A	A	A	14	3
7	A	A	A	R	A	A	A	A	A	A	A	A	A	A	A	A	A	16	1
8	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	R	16	1
9	A	A	A	A	A	A	A	A	R	R	A	A	A	A	A	A	R	14	3
10	A	A	A	A	A	A	A	A	R	A	A	A	R	R	A	A	R	13	4
11	R	A	R	R	A	A	A	A	A	A	A	A	A	A	A	A	A	14	3
12	A	A	A	A	A	A	A	A	A	A	A	A	R	A	A	A	A	16	1
13	R	A	A	A	A	A	R	A	A	A	A	A	A	A	A	A	A	15	2
14	A	A	R	A	A	A	A	A	A	R	A	A	A	A	A	A	R	14	3
15	R	A	A	A	A	A	A	A	R	R	A	R	A	A	A	A	A	13	4
16	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	R	16	1
17	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
18	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
19	A	A	A	A	A	A	R	A	A	A	A	A	A	A	A	A	A	16	1
20	R	A	R	R	R	A	R	A	R	R	R	R	R	A	A	A	R	6	11
21	R	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	16	1
22	R	A	R	A	A	A	A	A	A	R	A	A	A	A	A	A	A	14	3
23	A	A	A	A	R	A	A	A	A	R	A	R	A	A	A	A	A	14	3
24	A	A	A	A	A	A	A	A	A	A	R	R	A	A	A	A	A	15	2
25	A	A	A	A	R	A	R	A	A	R	A	A	A	A	A	A	R	13	4
26	A	A	A	A	A	A	A	A	R	A	R	R	A	A	A	A	A	14	3
27	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	R	16	1
28	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
29	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
30	R	A	R	A	A	A	A	A	A	A	A	A	A	A	A	A	A	15	2
31	R	R	R	R	A	A	A	A	R	R	R	R	A	R	A	A	A	8	9
32	R	A	R	A	A	A	A	A	A	A	A	A	A	R	R	A	A	13	4
33	A	A	A	A	A	A	A	A	A	R	R	R	A	A	A	A	A	14	3
34	R	A	A	A	A	A	A	A	A	A	A	R	A	A	A	A	R	14	3
35	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
36	R	A	R	A	A	A	A	A	R	A	A	R	A	A	A	R	R	11	6
37	R	A	R	R	A	A	A	A	A	A	A	R	A	R	A	A	R	11	6
38	A	A	A	A	A	A	A	R	R	R	A	A	A	R	A	A	R	12	5
39	A	A	A	A	A	A	A	A	R	A	A	A	A	R	R	A	A	14	3
40	R	A	R	R	A	A	A	A	R	R	A	A	R	R	R	R	R	7	10
41	A	A	A	A	A	A	A	A	A	R	A	A	R	A	A	A	A	15	2
42	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	17	0
43	A	A	A	A	A	A	A	A	R	A	R	A	A	R	A	A	R	13	4
44	A	A	A	A	A	A	A	A	A	R	A	R	A	R	A	A	A	14	3
45	A	A	A	A	A	A	A	R	A	A	A	A	R	A	A	A	A	15	2
46	R	A	R	A	A	A	A	A	A	R	A	A	A	A	A	A	R	15	2
47	A	A	A	A	A	A	A	A	A	R	A	A	A	A	A	A	R	15	2

*A indicates admission unconditionally; R indicates admission on probation.

†The four subdivisions of the Bernreuter Personality Inventory are as follows: neurotic tendency, self-sufficiency, introversion-extroversion, and dominance-submission.

‡The four subdivisions of the Bell Adjustment Inventory are as follows: home rating, health rating, social rating, and emotional rating.

number of measuring devices are considered. It has been said that a chain is no stronger than its weakest link. May this same concept be applied to measures of the fitness of candidates for admission to teacher training? If a candidate is not accepted because he does not attain the standard on all the measuring devices applied, then a very small percentage of the group of subjects tested would be admitted to teacher training unconditionally.

In order to determine the percentage of sophomores who would be admitted unconditionally on the various measures, the data in Table XXIII have been summarized in Table XXIV. A study of Table XXIV reveals that only eight of the subjects (17 per cent) attained the standard for unconditional admission on all the 17 measures. Seven more (15 per cent) would be admitted if they were permitted to fall below the standard on only one of the measuring devices. Unless a standard is set as to the number of measures on which the candidate may fail and still be permitted unconditional admission, a point is ultimately reached in which all of the 47 candidates would be admitted to teacher training unconditionally.

TABLE XXIV. SUMMARY OF THE RESULTS OBTAINED FROM THE APPLICATION OF THE STANDARDS TO THE SUBJECTS IN THIS STUDY

Number of Measures on Which Candidate Is Admitted Unconditionally	Number	Per cent of group
17	8	17
16	7	15
15	8	17
14	12	26
13	5	11
12	2	4
11	2	4
10	0	0
9	0	0
8	1	2
7	1	2
6	1	2
Total	47	100

CONCLUSIONS

That the present investigation is subject to a number of limitations we have repeatedly pointed out. In the first place, the group of students tested is too small for anything more than tentative conclusions and the determination of trends. In the second place, the reliability and validity of a number of the measuring devices used may be questioned. In the third place, we do not have a unified picture of the subjects, as we have no measure of the way in which pupils would react to the subjects in this study.

Considering the above limitations, however, there seems to be evidence that:

1. Teacher-training institutions can recruit a better type of individual for the teaching field by employing a more selective process—a program of admissions based on the results not only of intelligence tests,

but also of measures of health, scholarship, personality, and vocational interests.

2. The traits or qualities studied are not independent of each other; there is a constant interaction among them.

3. Individuals who enter certain teaching fields differ in abilities and interests from those who enter other teaching fields.

4. Ability, as measured by the tests and scales in this study, is not greatly increased by two years of college work.

In the light of the literature studied on the subject of desirable teacher qualifications and standards of admission used by various teacher-training institutions, and of the results obtained from administering a series of tests and other measuring devices to a group of sophomores entering teacher training at Indiana University, the following tentative standards are recommended:

Health:[1]	Only those who meet the requirements below shall be admitted to the teacher-training institution:
Skin and body:	Must be free from infection. Must be free from unsightly blemishes. Must show no marked deformities. Must weigh within 20 per cent if underweight; gross overweight will disqualify.
Teeth:	Must not show neglected carious teeth nor unhealthy gums.
Eyes:	Must be free from infection, marked muscular defects (as squint or nystagmus), or marked cosmetic defects caused by injury or disease. Vision must be at least 20/30 with or without glasses.
Nose:	Must be free from infection, chronic discharge, and marked defects caused by injury or disease.
Throat:	Must have healthy appearance and be free from chronically infected tonsils.
Neck:	Must be in healthy condition. Disqualifying conditions are: tuberculosis of the cervical glands, thyroid enlargements with signs of thyrotoxis.
Chest:	Must be in healthy condition. Causes for rejection are: tuberculosis (a positive sputum within two years), homoptysis (if within one year), chronic bronchitis, asthma (if attacks are frequent and severe), pleurisy with effusion.

[1] Based upon N. P. Neilson's "Report of the Committee on Teacher Training in Physical Education in the United States." pp. 57-8.

Heart:	Must be in healthy condition. Causes for rejection are: any organic lesion with decompensation, tachycardia (pulse rate above 100 after 10 minutes recumbency, taken on three successive occasions), aneurysm, hypertensive cardio-vascular diseases. Blood pressure must not exceed 150 m.m. systolic on three successive occasions.
Legs:	Must have healthy appearance and be free from defects, such as paralysis and varicose veins.
Feet:	Must be free from structural defects which may interfere with proper functioning.
Gastro-intestinal system:	Must be in healthy condition. Causes for rejection are: grossly enlarged liver or spleen, hemorrhoids with symptoms, known typhoid carriers (recent arrivals from the tropics should show freedom from intestinal parasites), and undue patency of the inguinal canals.
Genito-urinary system:	Must be in healthy condition. Causes for rejection are: nephritis, cystitis, urethritis, dysmenorrhea necessitating absence from duty with every period.
Nervous system:	Must be in healthy condition. Disqualifying conditions are: all organic lesions of the central nervous system, any tic or habit spasm, a history within one year of hysteria or nervous breakdown, epilepsy, evidence of emotional or mental instability.
Intelligence:	Only candidates who receive a percentile rating of 50 or above on an intelligence test or an aptitude test such as the American Council on Education Psychological Examination for College Freshmen shall be admitted unconditionally to teacher-training. Candidates who receive a percentile rating below 50 may be admitted to teacher training on probation for a period of one year. (The percentile rating shall be based on standard percentile norms for college freshmen.)
Scholarship:	Only those candidates who rank in the upper half of their high school graduating classes and whose scores on achievement tests are correspondingly good shall be

admitted unconditionally to teacher training. Candidates who rank in the lower 50 per cent of their high school graduating classes and whose scores on the achievement tests are correspondingly low may be admitted to teacher training on probation for a period of one year.

Personality: Only those candidates who meet the personal qualifications listed below will be admitted unconditionally to teacher training:

Impressiveness:

Physique:
- Must be approximately the average weight for height and age.
- Must be physically well-proportioned.
- Must not be greatly over- or under-weight.

Posture:
- Must have an erect and graceful posture.
- Must be physically well-poised.
- Must have a relaxed and springing step.
- Conditions to be avoided are: the appearance of being ungainly or awkward, round-shouldered, and hollow-chested.

Personal Appearance:
- Must have clean hair, skin, and nails.
- Must take pride in personal appearance.
- Must have clean teeth.
- Conditions to be avoided are: disregard for the fundamental laws of good health.
- Must wear simple but attractive clothes.
- Must arrange hair simply but neatly.
- Must use cosmetics moderately and apply them artistically.
- Must wear colors and design that harmonize so as to accentuate the individual's good qualities, such as color of hair, eyes, and skin.
- Must be able to adapt present styles to individual needs.

Manner:
- Must be able to "look a person in the eye."
- Must not give way to one's feelings in the presence of others.
- Must be courteous and respect the rights of others.
- Must strive to reveal sincerity through speech and acts.
- Must be free from peculiar bodily mannerisms.

Speech:
- Must be free from undesirable habits of articulation, such as sound additions, omissions, and substitutions.

	Must be free from a defective rhythm of speech, such as stuttering and arhythmia. Must have acceptable pronunciation. Must have a pleasant, flexible voice. Qualities to be avoided or counteracted are: nasal, denasal, muffled, metallic, harsh, breathy, and hoarse.
Self-Control:	Must be free from neurotic tendencies. Must be able to "keep one's head" in times of crises. Must be able to "carry on" even though plans are changed. Must be able to accept criticism in the proper spirit. Must be able to remain calm regardless of what happens. Must not become irritable or impatient. Must not act conceited. Must be able to see the humor in a situation when a funny incident occurs. Must not become disturbed over things of minor importance.
Thoroughness:	Must be able to perform duties efficiently. Must strive to do more than just enough to "get by." Must take pride in doing work accurately and completely. Must give due consideration to details; must not take things for granted. Must be able to organize one's work so as to conserve time and energy.
Imagination:	Must be able to apply one's knowledge and experience toward the solution of new problems. Must be able to do creative work. Must be able to suggest more effective ways of doing things. Must be able to find solutions to problems without too much assistance from others.
Decision:	Must be able to think through a problem; must not jump at conclusions. Must be able to discriminate between the essential and the nonessential. Must be willing to "stand by" one's decision, but be able to change one's point of view in light of sound reasoning.
Adaptability:	Must be able to adjust oneself to new problems and situations quickly and easily.

	Must be able to see the other person's point of view.
	Must be able to meet people on their own level.
	Must be able to make friends easily.
Leadership:	Must be able to assert oneself in face-to-face situations.
	Must be able to win the respect and confidence of others.
	Must have self-confidence.
	Must enjoy dealing with people.
	Must be willing to assume responsibility.
	Must have courage to speak frankly.
	Must be fair in one's dealings with others.
	Must be able to handle difficult situations skillfully.
	Must be able to criticize others without being antagonistic.
Vocational Interests:	Only those candidates who possess a high level of native ability and give evidence of interest in teaching, as measured by standardized tests, shall be admitted to teacher training unconditionally.

One must bear in mind the fact that these standards are *tentative*—they are subject to modification and change in light of evidence presented as a result of a program of experimental testing. They simply serve as guides in a program of educational and vocational guidance.

Since an individual's success in the field of teaching is conditioned by the action and interaction of various factors, the personnel worker cannot counsel a student wisely in regard to his probable success in the teaching profession until he knows that student's abilities and personal qualities. After the counselor has studied these factors in relation to one another, he has a more or less reliable basis upon which to formulate a clinical judgment and should be able to show the student how his pattern of interests and abilities fits into the job of teaching. The student should be able, with this information before him, to decide whether or not he should enter the field of teaching.

RECOMMENDATIONS

From the above tentative conclusions the following recommendations are proposed:

1. That greater care be exercised in the selection of candidates for teacher training.

2. That more consideration be given to secondary school scholarship, because it seems that students whose scholastic attainments have placed them in the upper half of their high school graduating class are

better able to profit by their experiences in the teacher-training institution.

3. That the secondary schools assist the teacher-training institution in the selection of the best prospects for the teaching profession.

4. That cumulative records regarding the student's health, intelligence, personality, and vocational interests accompany him through his educational course from the time he first enters school; in order that personnel workers may have access to valuable information concerning the candidate who seeks admission to the teacher-training institution.

5. That an attempt be made to develop measures for the selection of the best prospects in specific or in closely related fields rather than to attempt to select prospective teachers for the various teaching fields by means of general measures translated in terms of a common set of standards.

6. That a more flexible program be provided for the prospective teacher, in order that he may have an opportunity to develop along the lines where he reveals weakness.

7. That a follow-up study be made of the students used in this investigation after they have entered the teaching profession, in the hope that it will throw light upon some of the more perplexing student personnel problems which confront the teacher-training institution at the present time.

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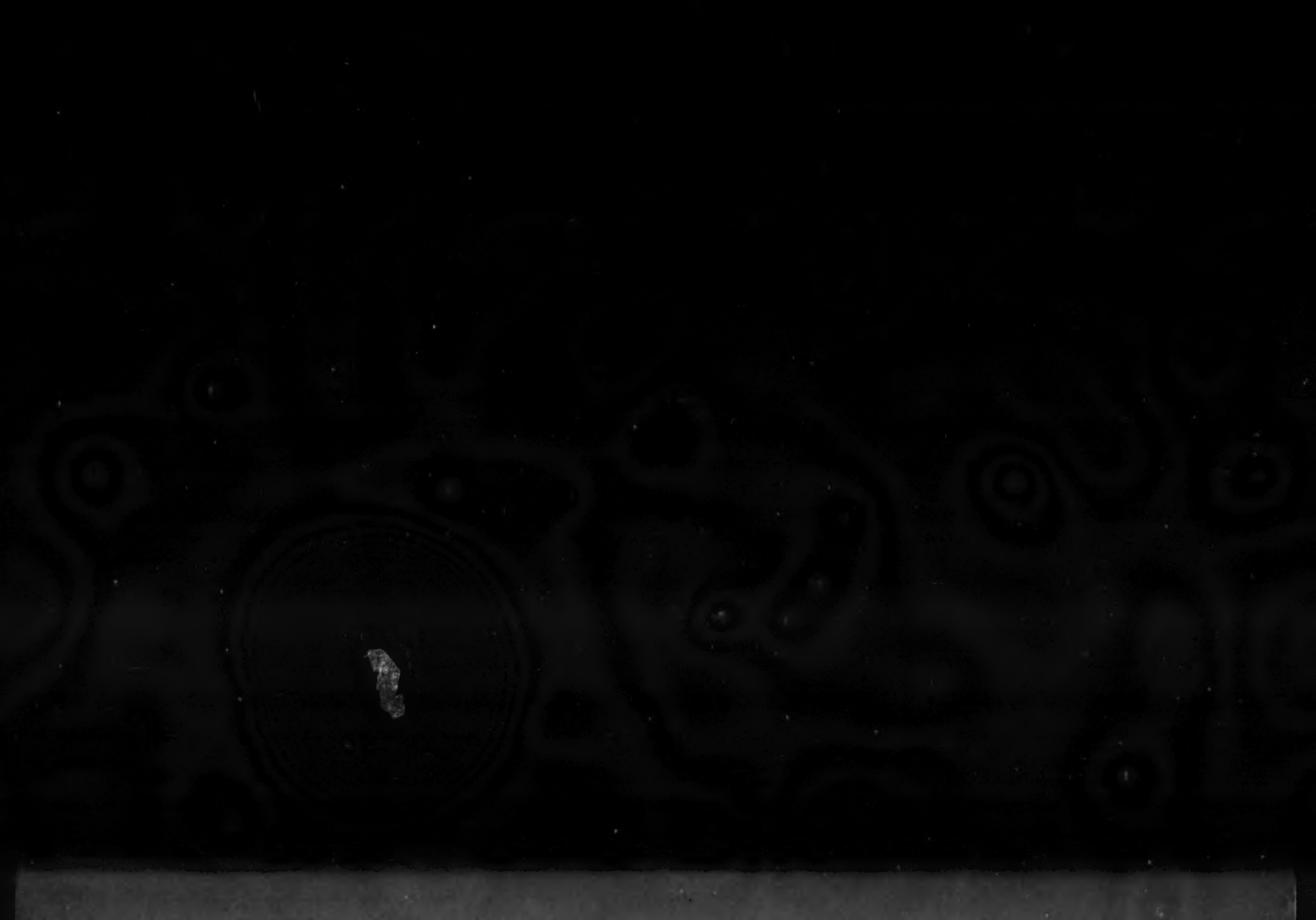
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